Li Shi Zhen

Pulse Diagnosis

Pulse Diagnosis
by
Li Shi Zhen

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Hoc Ku Huynh and G.M. Seifert.

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Introduction

Li Shi Zhen is arguably the greatest natural historian that China has ever produced. He was born into the family of a physician in 1518 and was a native of Hu Bei province. In his later years he was nick-named Bin Hu after the province.

His masterpiece, the Ben Cao Gang Mu (*Compendium of Materia Medica*) contains 52 volumes and took 30 years to complete. However, he also wrote several other texts, including the book on which this translation is based, the Bin Hu Mai Xue (*The Pulse Studies of Bin Hu*).

The Bin Hu Mai Xue is divided into two sections. The first section is based on the Si Yan Ju Yao (*Essentials of the Four Words*) written by Cui Jia Yan of the Song Dynasty (420 A.D. to 479 A.D.) and re-edited by Li Shi Zhen's father, Li Yan Wen. The second section discusses 27 pulses and their diagnostic value and is written in a type of formal verse with seven characters per line. Since these verses made it easy to read and remember and since it established a good theoretical framework, it became a standard text superceding the Mai Xue.

Today, this book is still considered a good text for beginners and an important reference for practitioners. In order to make it more easily understood and because after translation it is impossible to keep the original verse form, annotations and simple explanations have been added. Pulse diagrams based on electrocardiogram readings have been added. These are the current standards used throughout all China.

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The Jing Mai and the Mai Qi

1.1 The Physiology of the Jing Mai

Mai is the Chinese term for blood vessels. Those blood vessels which travel along the channels are referred to as the *Jing Mai*. Together with their branches they form a network which (externally) covers the entire surface of the body and (internally) penetrates to its deepest levels. They conduct the *Qi* and *Blood* and enable blood to permeate the entire system, completing the circulatory process. Their pulse beats have a close relationship to respiration and therefore to qi, as the lungs rule the qi.

The jing mai are distributed evenly throughout the body in a pattern similar to the rivers and streams flowing through the earth. Internally they connect directly to the heart and externally they spread through the skin, muscles and connective tissues in a criss-cross pattern, carrying the blood as they go.

1.2 The Function of the Mai Qi

Pulse beats are produced mainly by the mai qi, which means by a contracting and expanding activity in the walls of the jing mai. The mai qi not only obtains continuous nourishment from the prenatal kidney essence and the postnatal stomach essence, but also is founded on *Ying Qi* and *Wei Qi*. Blood circulation is continuous and is therefore yang in nature; but the essence substance contained by the blood vessels is yin. Hence the mai qi is yin within yang. Ying qi and wei qi are produced by the spleen and stomach. Ying qi produces yin (blood), the function of which is to nourish the entire body, and wei qi protects the superficial part of the body. Ying qi is located at the level of the blood, so it circulates in the jing mai with the yin (blood). Wei qi is a type of yang qi and it circulates outside of the jing mai. These interacting internal-external, yin-yang factors generate the pulse beats.

1.3 Direction of Blood Circulation by Stomach Qi and the Zong Qi; the Consequential Theory of Blood Flow Through the Jing Mai following the Movement of Qi

The theory of blood flow through the jing mai following the stomach qi and *Zong Qi* proposes that circulation results from interaction between the jing mai and yang qi. The jing mai belong to yin and the qi belongs to yang. When the yin jing mai and the yang qi combine, pulse beats are produced — the yang qi creates a pump-like movement, forcing the blood through the jing mai. The yang qi includes the stomach qi and the zong qi.

1.4 Significance of the Wrist Pulse and the Relation between Respiration and Blood Circulation

There are twelve jing mai which together permeate the entire body, and which are individually reflected at the wrist area of the hand *Tai Yin* (lung) channel. This channel travels downward through the throat and connects with the lungs, forming most of the respiratory tract. The throat is the gateway through which qi enters and exits, and the lung is the venue for exchange of qi. It is also the meeting place of the "hundred vessels" and its *yuan* point, L-9 (taiyuan), is the great meeting place of all blood vessels. This point is located at the wrist. The surrounding region is therefore used to gauge changes to the qi in each of the jing mai and *Zang Fu*. One inhalation and one exhalation is called one respiration and according to ancient calculations a normal person has 13,500 respirations every day. Blood moves forward through his or her channels by 6 cun per respiration and over a twenty-four hour period covers 81,000 cun. However, according to present day calculations, a normal person has 24,000 to 26,000 respirations per day. Both ancient and modern sources agree that there are basically four pulse beats per respiration.

Pulse Positions and Diagnostic Techniques

2.1 The Three Pulse Positions: Cun, Guan, Chi

In diagnosing the pulse, the patient extends and relaxes his arm with his palm facing upward.

Behind the wrist there is a prominent bone (the styloid process of the radius) which marks the guan position. In front of the guan position is the cun position, belonging to yang, and behind the guan position is the chi position, belonging to yin.

The physician finds the pulse by first locating the guan position with his middle finger. His index and ring fingers then naturally locate the cun and chi positions.

There is, however, a small minority of people whose pulses cannot be felt at these positions. They are found at the external aspect of the wrist and are called opposite guan pulses (*Fan Guan Mai*). Some people have these pulses at one wrist, some at both wrists. These pulses do not indicate disease but result from a normal anatomical variation.

2.2 The Three Positions of the Zang Fu Organs and the Difference in Male and Female Pulses

Pathologies of the zang fu organs are reflected at the wrist pulse, and each organ has an individual position. The cun position on the left wrist belongs to the heart. The guan position on the left wrist belongs to the liver and gall bladder. The chi position on the left wrist belongs to the kidneys, small intestines and bladder. The cun position on the right wrist belongs to the lungs. The guan position on the right wrist belongs to the spleen and stomach. The chi position on the right wrist belongs to the "Gate of Life" (*Ming Men*) and large intestine.

However, this is only one idea of how the six positions on the left and right hands relate to the zang fu organs.

Another idea expressed by Wang Shù Hè in his book *Mai Jing* states that the left hand cun pulse, which he calls *Ren Ying*, registers all attacks by external disease and all external symptoms, and that the right hand cun pulse, which he calls *Qi Kou*, registers all internal diseases and all internal injuries. However, this idea has not found favor with physicians of the present era and is not considered of primary importance. It has been included only for reference.

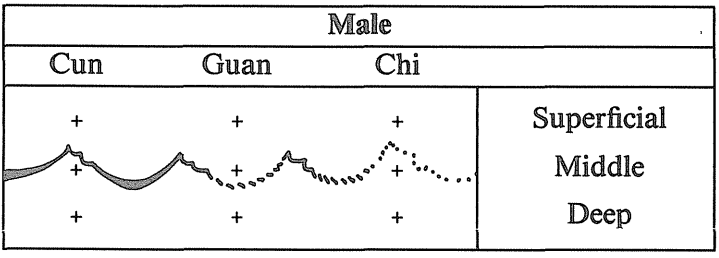
In the *Nei Jing* the arteries at the side of the neck are called *ren ying* (ST-9) and the arteries at the three wrist positions are called *qi kou*. Comparing these pulses is an ancient technique of diagnosing diseases of the whole body.

The *Mai Jing* calls the right and left chi pulses *Shen Men* and uses them principally to diagnose changes in the yin and yang balance of the kidneys. When the kidney yin and yang are strong, the body is strong, but when the kidney yin and yang are weak the body is deficient and failing. If there are no pulses at the chi position it means the kidney yin and yang are very weak and the disease is extremely serious.

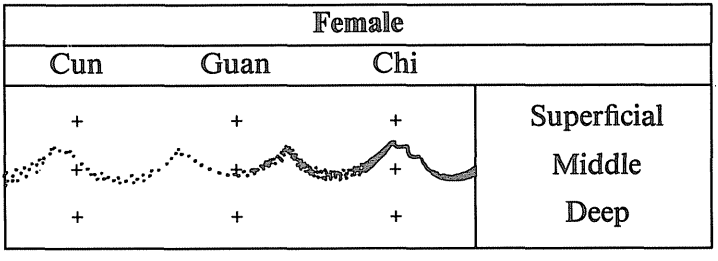
Both men and women have a slight yin-yang imbalance which is reflected as a slight difference between the right and left pulses. The left is yang and the right is yin. Men have more yang qi. So, provided their qi is well regulated, their left hand pulse is stronger. Women have more yin blood. So, provided their qi is well regulated, their right hand pulse is stronger.

When the cun and chi positions are compared to each other, the cun is more yang and the chi is more yin.

Males have more yang qi and therefore their cun pulse should be stronger than their chi pulse.



Females have more yin blood and therefore their chi pulse should be stronger than their cun pulse. When pulse strengths are opposite to this pattern it indicates disease.



2.3 Seven Diagnostic Techniques and Nine Conditions

The seven techniques of diagnosis include the superficial, middle, deep, upper, lower, left and right techniques.

The superficial technique is used to determine the presence of an external disease caused by an external attack.

The middle technique is used to determine the presence of a pathology of the spleen and stomach.

The deep technique is used to determine the presence of an internal injury or internal disease.

The upper technique refers to the pulse at the cun position and the lower technique refers to the pulse at the chi position.

The left technique refers to the pulse of the left hand and the right technique refers to the pulse of the right hand.

The diagnostician needs to compare the upper to the lower and the left to the right.

The seven techniques are used to establish the symptoms and causes of a disease.

The nine conditions are diagnosed by applying pressure from the superficial through to the medium and deep levels in each of the three positions (cun, guan, chi). The pulse must be felt for at least five beats at each level to establish a clear pattern. The three levels at the three positions comprise the nine conditions.

2.4 Using the Wrist Pulse to Distinguish Disease Changes Over the Whole of the Body

Generally, the cun pulse is used to diagnose diseases from the diaphragm to the crown, the guan pulse is used to diagnose diseases from the navel up to the lower diaphragm and the chi pulse is used to diagnose diseases below the navel. The three left positions are used for diseases on the left side of the body and the three right positions are used for diseases on the right side of the body.

The upper position is used to diagnose the upper body, the middle position the middle body, the lower position the lower body, the left hand to diagnose the left side of the body and the right hand to diagnose the right side of the body.

Thus, the area and nature of the disease can be determined from the wrist pulse. For example, if the ribs on the left side of the body are painful, the left guan pulse will be wiry and tight.

Pulse Positions		
Left	*Area*	*Right*
Cun	Diaphragm to Crown	Cun
Guan	Navel to Diaphragm	Guan
Chi	Navel to Feet	Chi

Pulse Depths		
Left	*Area*	*Right*
Superficial	Upper Body	Superficial
Middle	Middle Body	Middle
Deep	Lower Body	Deep

The Normal Pulses of the Five Organs and Their Different Qualities

3.1 The Different Levels of the Normal Pulses

The normal pulses of the five organs must be felt on all three levels to determine a pattern.

At the superficial level the pulses of the heart and lungs can be felt. At the deep level the pulses of the kidneys and liver can be felt. Between the superficial and deep levels at the middle level the pulses of the spleen and stomach can be felt.

3.2 The Different Qualities of the Normal Pulses

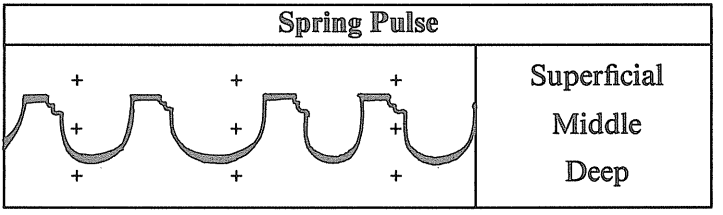
The superficial pulse at the heart position feels big and scattered. If slight pressure is applied by the fingertip, the pulse feels rough and big. If more pressure is applied the pulse feels broad, big, scattered and without strength. The superficial pulse at the lung position feels choppy and short. If slight pressure is applied by the fingertip, the pulse feels blocked and choppy. If more pressure is applied the pulse feels short and hasty. The deep pulse at the liver position feels long, slightly wiry and tight. The deep pulse at the kidney position feels full, strong, slippery and soft. The middle pulse at the spleen and stomach position feels regular, neither fast nor slow.

Both the kidneys and ming men are felt at the chi position. According to recent findings, ming men is located between the two kidneys. Even though the ancients say that the left chi pulse belongs to the kidney and the right chi pulse belongs to ming men, actually the weakness or strength of the yang yuan qi can be felt at both chi pulses.

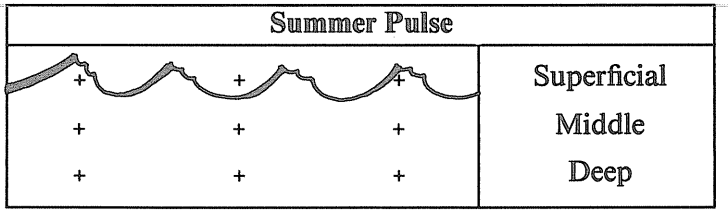
3.3 Harmonious Pulses of the Four Seasons

The human body is subject to influence by climatic changes over the four seasons. To maintain homeostasis there are regular physiological responses which bring the body into harmony with the seasons. These changes are reflected on the pulse.

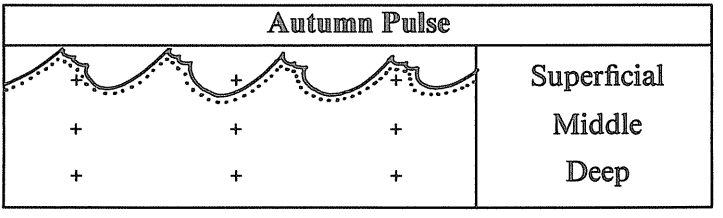
During spring the yang qi gradually intensifies. Simultaneously the tension of the pulse gradually increases and becomes wiry.



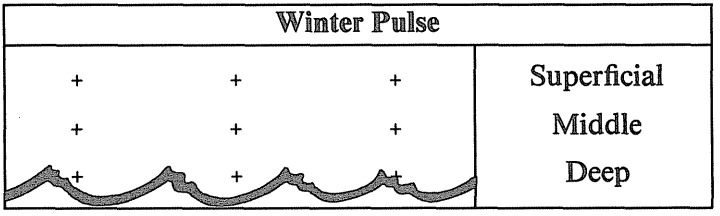
During summer the climate becomes hot and the pulse overflows (like a hook).



During autumn the yang qi gradually diminishes and the pulse becomes empty, floating, soft and fine (like a hair).



During winter the climate becomes cold and the pulse becomes deep and strong (like a stone).



If the wiry pulse, hook pulse, hair pulse and stone pulse are each felt in their respective seasons and are combined with a regular pulse, not too fast and not too slow, the body is healthy.

When these pulses are felt in combination with a strong full pulse it usually indicates a disease caused by external attacks or excessive perverse qi.

When these pulses are felt in combination with an empty, weak, thin or minute pulse it usually indicates an internal injury with a deficiency of upright qi.

However, when analyzing the seasonal and disease pulses, the most important factor is the state of the stomach qi. When the pulse contains stomach qi, it has shen and a pulse with shen is regular, not too fast and not too slow. For instance, a weak and minute pulse with regularity indicates *Shen* (stomach qi). This means that although the symptoms are very severe they can still be treated.

Using the Principal Pulses to Differentiate

4.1 The Four Principal Pulses: Floating, Sinking, Slow and Rapid

Before beginning a pulse diagnosis the practitioner must normalize his own breathing. Once his breathing becomes normal he can begin to take the pulse.

If there are four to five pulse beats to each respiration (of the practitioner) the pulse is healthy.

If there are three to four pulse beats to each respiration the pulse is slow and indicates a cold disease.

On the other hand, if there are six pulse beats to each respiration the pulse is rapid and indicates a hot disease.

If there are between one and two pulse beats to each respiration the pulse is slower than a slow pulse. This indicates extremely severe perverse cold.

If there are over seven or eight pulse beats to each respiration the pulse is more rapid than a rapid pulse. This indicates extremely severe perverse heat.

When discussing the causes of disease it is customary in traditional Chinese medicine to speak of external factors, usually the six evils (wind, cold, heat, dampness, dryness and fire) and internal factors, usually the seven emotions (joy, anger, worry, thought, grief, fright and fear).

To achieve a clear understanding of the condition, the external or internal causes of a disease are considered in combination with the floating, sinking, slow and rapid pulses.

In most cases when external causes occur with a floating pulse, there are external diseases of wind and cold.

In most cases external causes occur with a sinking pulse during the onset of influenza, at which time perverse cold penetrates more deeply and becomes trapped internally. The perverse cold is unable to surface through the muscle layers.

When external causes occur with a slow pulse, the zang fu qi is deficient. This is a yin symptom, indicating that the zang fu are too weak to repel the perverse qi.

When external causes occur with a rapid pulse, the channel has been injured by wind heat. This is a yang symptom, indicating that perverse qi is located superficially.

When internal causes occur with a floating pulse, the *Jin Qi* is deficient and wind moves internally.

Internal causes occur with a deep pulse when qi sags, prolapses, becomes melancholy or stagnates.

Internal causes that occur with a slow pulse usually indicate an absence of yuan qi which allows an accumulation of yin cold.

Internal causes occurring with a rapid pulse generally indicate excesses of perverse fire or yang heat.

However, the pulse which appears clinically will very rarely show a single pulse quality. It is almost always a composite pulse. For example, the rapid pulse can be divided into floating rapid and sinking rapid types. A floating rapid pulse indicates perverse heat at the superficial level and a sinking rapid pulse indicates perverse heat at the deep level.

Likewise, the slow pulse can be divided into floating slow and sinking slow types. A floating slow pulse indicates empty cold at the superficial level and a sinking slow pulse indicates stagnant cold internally.

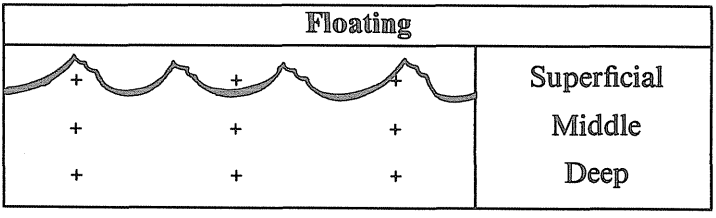
The theory of the pulse is very complicated but it is based upon the four principal pulses — floating, sinking, slow and rapid. Once they are understood, by elaborating on them, the entire subject can be clarified.

To make a complete diagnosis, the pulse must be considered in combination with the symptoms. By doing this, it can be understood whether the disease is superficial or deep, yin or yang, wind or qi, cold or hot, external or internal.

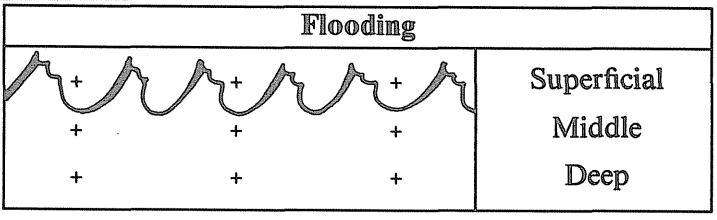
Types of Pulses

5.1 The Floating Pulse and Its Seven Types

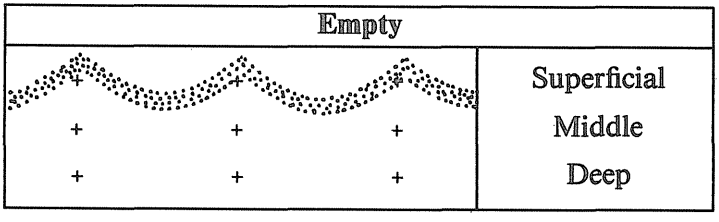
The **floating pulse** is like the yang energy of heaven in the space of the sky. It is pure and slightly rising. It can be felt when light pressure is applied to the skin (level), and feels like a piece of wood floating on the water. It is divided into seven different types.



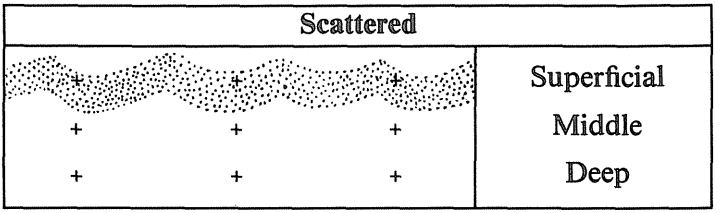
The **flooding pulse** is floating. It feels strong with a big rough body as it rises and falls. It has a full feeling.



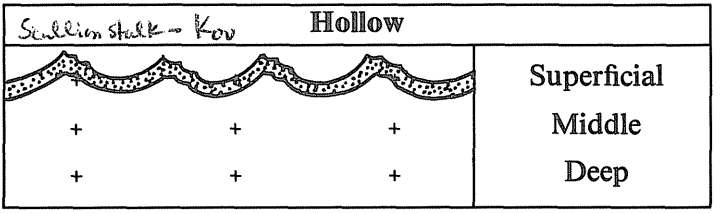
The **empty pulse** is floating and weak with a big, but softer body and slower beats.



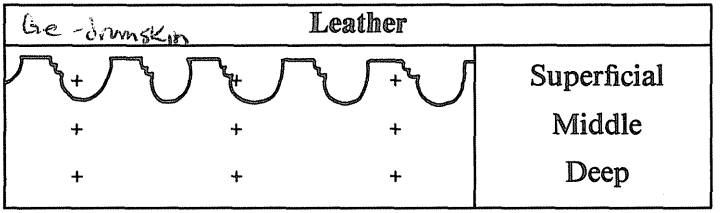
The **scattered pulse** is floating but more diffused than an empty pulse and disappears when strong pressure is applied.



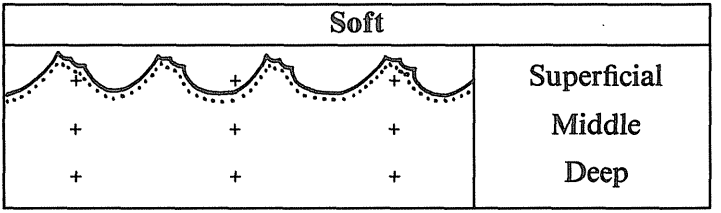
The **hollow pulse** is floating but without substance in its center. The edge can be felt but not the middle.



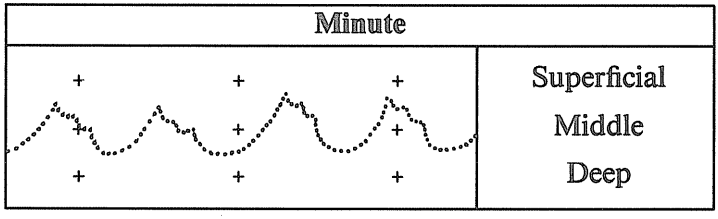
The **leather pulse** is floating, but more wiry and rapid than a hollow pulse.



The **soft pulse** is floating, fine and without strength, like a piece of cotton floating on water.

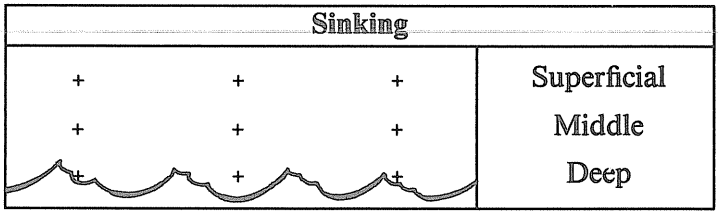


The **minute pulse** is a floating pulse, smaller and softer than a soft pulse. It will disappear intermittently under slight pressure.

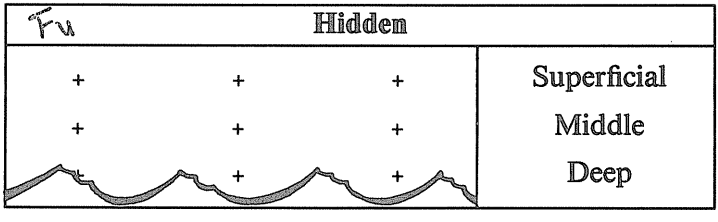


5.2 The Sinking Pulse and Its Five Types

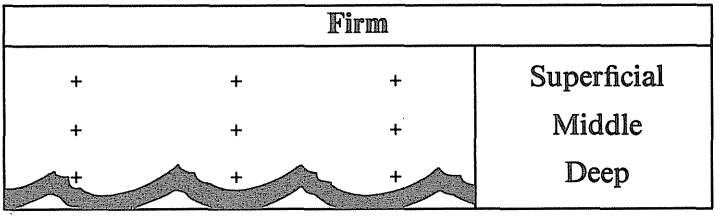
The **sinking pulse** is like the yin qi of earth — it sinks gradually and can only be felt when pressure is applied to the level of tendons and bone. It is divided into five different types.



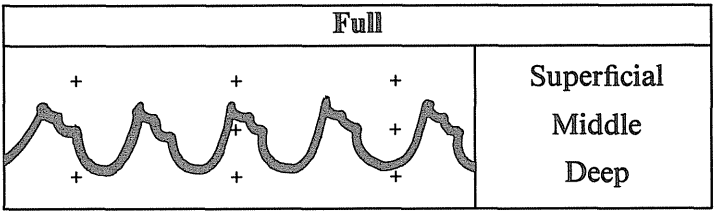
The **hidden pulse** is deeper than the sinking pulse and strong pressure to the bone level must be applied before it can be felt.



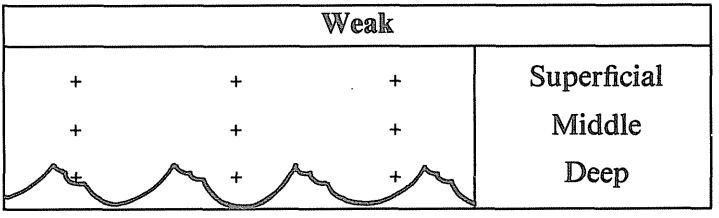
The **firm pulse** is sinking, strong and full, with a big body, and feels long and wiry.



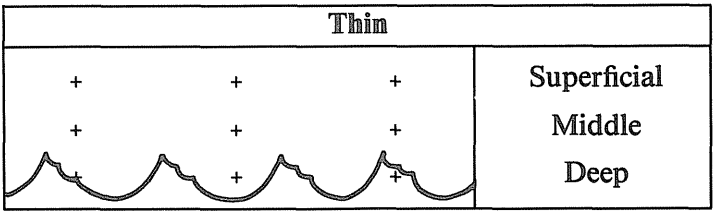
The **full pulse** is sinking, firmer than the firm pulse, and has a strong beat.



The **weak pulse** is sinking but soft and weak without strength. It feels fine and small like a thread of cotton.



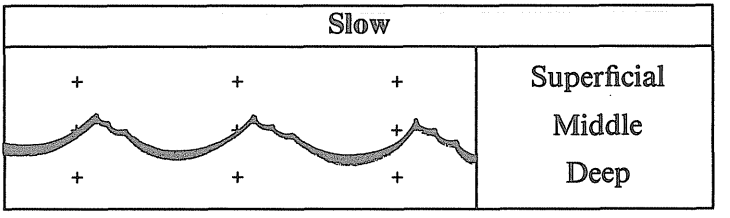
The **thin pulse** is sinking, smaller than a weak pulse and fine like a spider's web.



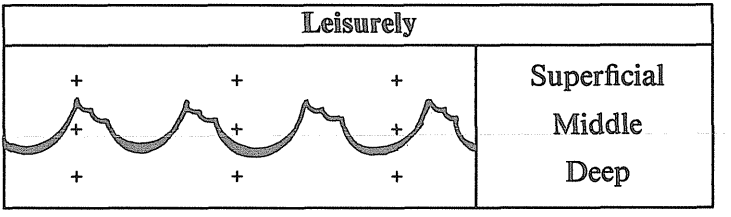
5.3 The Slow Pulse and Its Related Types

This section discusses the slow pulse and its related types — the leisurely, choppy, knotted and intermittent pulses. It also briefly mentions the damaged, failed and collapsed *jin* pulses.

The **slow pulse** results from a deficiency of yang and an excess of yin. It beats three times per respiration.



The **leisurely pulse** is even in all respects and slightly quicker than the slow pulse (four beats to the breath).



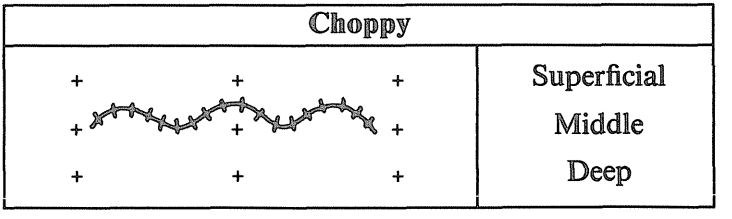
The **damaged pulse** beats twice per respiration.

The **failed pulse** beats once per respiration.

The **collapsed jin pulse** beats once per two respirations.

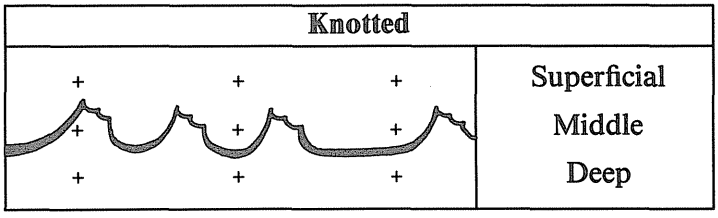
A damaged, failed or collapsed jin pulse indicates the disease has developed to a very severe stage and the jin qi is failing.

The **choppy pulse** is slow and thin with rough uneven beats (beats that do not flow evenly).

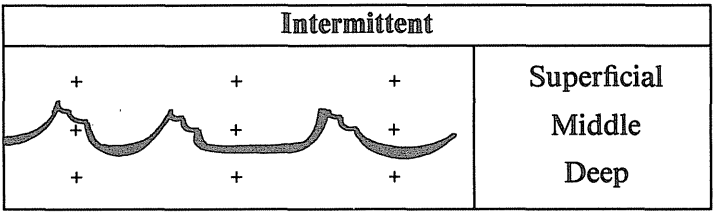


There are two different types of identifiable irregular pulses, the knotted and intermittent pulses.

The **knotted pulse** is leisurely, but pauses at irregular intervals, for one beat.



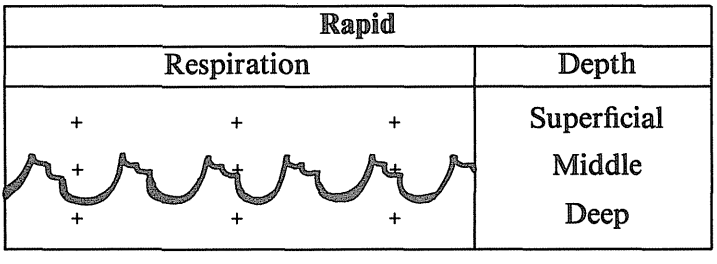
The **intermittent pulse** is leisurely, but pauses at regular intervals for a little longer than one beat.



5.4 The Rapid Pulse and Its Related Types

This section discusses the rapid pulse and its related types — the slippery, tight, hasty and moving pulses. It also briefly mentions the very rapid, speeding and collapsed pulses.

The **rapid pulse** results from a deficiency of yin and an excess of yang. It beats six times to a respiration.



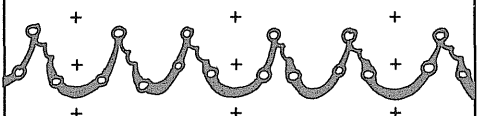
The very rapid pulse has seven beats per respiration.

The speeding pulse has eight beats per respiration.

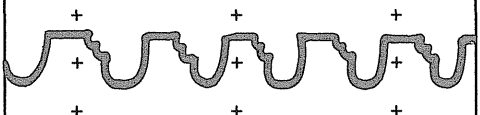
The collapsed pulse has nine or more beats per respiration and indicates the yin qi has already collapsed.

A very rapid, speeding or collapsed pulse means the yin-jing has been damaged and there is consequential excessive yang-heat.

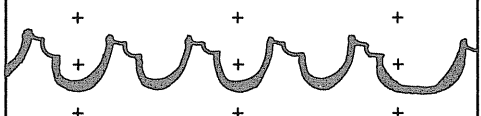
A slippery pulse is a rapid pulse which comes and goes freely.

Slippery	
Respiration	Depth
	Superficial Middle Deep

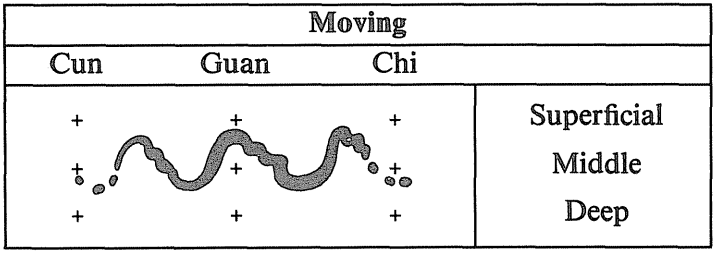
A tight pulse is a rapid pulse which vibrates to the left and right like a tightly stretched rope.

Tight	
Respiration	Depth
	Superficial Middle Deep

The hasty pulse is a rapid pulse which is felt mainly at the cun position and which sometimes rests for one beat at irregular intervals.

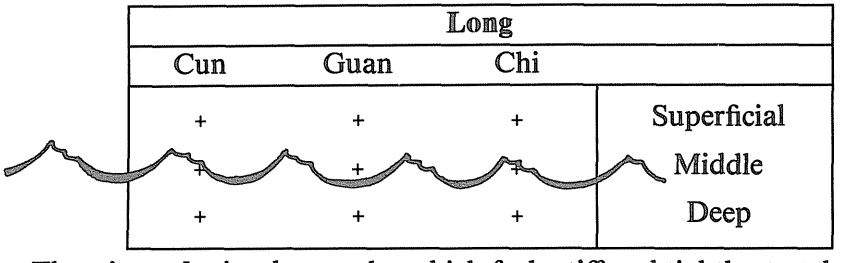
Hasty	
Respiration	Depth
	Superficial Middle Deep

The **moving pulse** is rapid with a strong, firm beat which feels like a bean under the finger. It is felt mainly at the guan position.

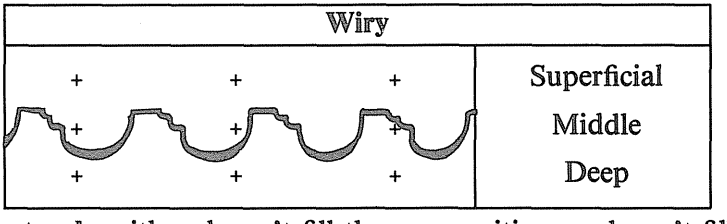


5.5 The Long, Wiry and Short Pulses

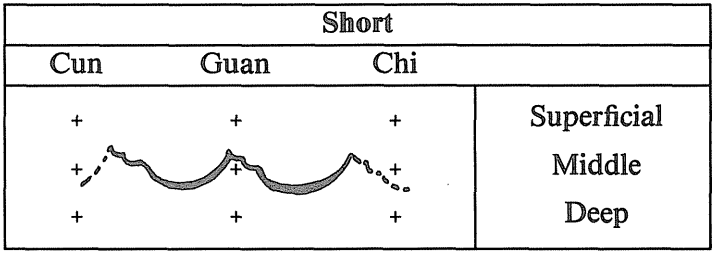
The **long pulse** extends beyond the cun and chi positions. A long pulse which is soft means the upright qi is abundant.



The **wiry pulse** is a long pulse which feels stiff and tightly stretched.



The **short pulse** either doesn't fill the cun position or doesn't fill the chi position. It indicates deficiency and damage of the blood and qi.



Pulses and Associated Diseases

Single pulse qualities rarely occur in isolation, they almost always combine and each combination relates to a specific disease.

6.1 The Floating Pulses and Their Associated Diseases

The **floating pulse** relates to two main disease states — external and internal. It is more commonly found in external diseases, but also occurs with internal deficiencies.

The **floating pulse with strength** indicates external diseases.

The **floating pulse without strength** indicates internal diseases with blood deficiency.

The **floating slow pulse** indicates empty qi and injury by wind.

The **floating rapid pulse** indicates injury due to external wind and heat.

The **floating tight pulse** indicates external wind cold stagnating in the jing mai.

The **floating leisurely pulse** indicates perverse wind damp at the muscle level.

The **floating empty pulse** indicates a summer heat injury to the yuan qi.

The **floating hollow pulse** indicates great loss of blood.

The **floating flooding pulse** indicates yin deficiency and excessive fire.

The **floating minute pulse** indicates fatigue.

The **floating soft pulse** indicates deficiency or damage to the yin jing.

The **floating scattered pulse** indicates extreme deficiency of blood and qi.

The **floating wiry pulse** indicates excessive phlegm internally.

The **floating slippery pulse** indicates excessive stagnation or accumulation of phlegm heat.

6.2 The Sinking Pulses and Their Associated Diseases

The **sinking pulse** relates to three main disease states — internal injuries with internal symptoms (organ disorders without internal attack), yin cold with perverse qi and all types of stagnation or accumulation (congestion in a single area causing pain or pain on movement).

The **sinking pulse with strength** indicates phlegm and injured digestive ability.

The **sinking pulse without strength** indicates qi stagnation.

The **sinking slow pulse** indicates deficiency cold.

The **sinking rapid pulse** indicates perverse heat trapped internally.

The **sinking tight pulse** indicates stagnant cold causing pain (cold pain).

The **sinking leisurely pulse** indicates accumulated thin phlegm.

The **sinking firm pulse** indicates chronic cold disease.

The **sinking full pulse** indicates excessive internal heat.

The **sinking weak pulse** indicates that the yin jing is deficient or damaged.

The **sinking thin pulse** indicates stagnation of perverse damp.

Bi is a disease caused by three types of perverse qi — wind, cold and dampness. Characteristically, it causes pain on movement of the joints. When pain moves from joint to joint and is accompanied by excessive sweating, it indicates wind bi. When pain remains fixed in the same joint, it indicates cold bi. When the limbs are heavy and are unable to move, it indicates damp bi.

The **sinking wiry pulse** indicates pain caused by phlegm.

The **sinking slippery pulse** occurs when diminished digestive ability causes symptoms of accumulation.

The **sinking hidden pulse** occurs when yin poisoning and accumulation create severe vomiting and diarrhea.

6.3 The Slow and Rapid Pulses and Their Associated Diseases

The **slow pulse** usually occurs in a deficiency disease of the five zang, especially when the yang qi is trapped internally.

The **slow pulse with strength** indicates abdominal pain caused by cold stagnation.

The **slow pulse without strength** indicates a deficient cold disease caused by an insufficiency of yang qi.

The **rapid pulse** usually occurs in a hot disease of the six fu, for instance stomach heat counterflowing and causing vomiting, or heat injuring the mind and causing madness.

The **rapid pulse with strength** indicates excessive heat.

The **rapid pulse without strength** occurs after pus is discharged from an abscess. Abscesses are formed by heat in the blood. After they discharge pus the ying and blood become damaged but a small amount of heat remains.

6.4 The Slippery and Choppy Pulses and Their Associated Diseases

The **slippery pulse** occurs with internal excesses of perverse qi. These include accumulation or stagnation of phlegm, qi stagnation due to damaged digestion, accumulation of extravasated blood and qi stagnation due to vomiting.

The **slippery floating pulse** indicates *Tan Yin*.

The **slippery deep pulse** indicates damaged digestive ability.

The **slippery guan pulse** indicates accumulation of blood.

The **slippery cun pulse** indicates vomiting due to counterflow.

The **choppy pulse** occurs when the jing and blood are deficient, or the blood is deficient and the jin is damaged.

Whenever cold and dampness penetrate the blood, stomach disorders develop with constipation due to yin deficiency, the jin becomes damaged due to excessive perspiration, or convulsions occur due to deficiency and damage of the ying and wei.

6.5 The Wiry and Tight Pulses and Their Associated Diseases

The **wiry pulse** usually occurs in gall bladder and liver diseases. However, it can also occur in a water and fluid disease.

The **wiry rapid pulse** indicates excessive heat.

The **wiry slow pulse** indicates excessive cold.

The **wiry floating pulse** indicates a phlegm disease. Symptoms include dyspnea, coughing, stuffiness in the chest, slight edema and blackish skin.

The **wiry deep pulse** usually occurs when there is pain in the ribs and chest.

The **wiry cun pulse** indicates headache (the cun position belongs to the upper body) and is also called the yang wiry pulse.

The **wiry chi pulse** indicates abdominal pain (the chi position belongs to the lower body) and is also called the yin wiry pulse.

The **tight pulse** usually occurs with excesses of perverse cold. However, it is also found with any type of pain.

The **tight floating pulse** indicates external perverse cold.

The **tight deep pulse** indicates internal deficiency cold pain.

6.6 The Long, Short, Big, Small, Flooding, Empty and Full Pulses and Their Associated Diseases

The **long pulse** occurs when the upright qi is strong and is a normal phenomena indicating that the body is healthy.

The **long floating pulse** occurs with extreme tension, usually indicating wind type epilepsy.

The **short pulse** usually indicates empty qi.

The **short deep pulse** indicates indigestion.

The **big pulse** indicates that the disease is intensifying.

The **small (thin) pulse** occurs when there is deficiency of blood and qi or when perverse damp stagnates in the channels.

The **flooding pulse** occurs when excessive heat damages the yin.

The **empty pulse** occurs when there is an overall deficiency of blood and qi.

The **full pulse** occurs when perverse qi is strong.

6.7 The Leisurely, Soft, Weak, Minute, Moving and Leather Pulses and Their Associated Diseases

The **leisurely pulse** means the stomach qi is even and it is a normal phenomenon.

The **leisurely big pulse** usually indicates symptoms of wind heat.

The **leisurely thin pulse** usually indicates a cold damp disease.

The **leisurely choppy pulse** indicates diminished or deficient ying and blood.

The **leisurely slippery pulse** indicates excessive internal heat.

The **thin pulse** can be divided into the soft and weak pulses.

The **thin soft pulse** indicates that the yin blood has been damaged.

The **thin weak pulse** indicates failure of the yang qi.

When the yang qi fails it cannot nourish the body. Fear of cold easily develops. When the yin is deficient and cannot harmonize the yang, there are hot symptoms.

The **minute pulse** indicates that both blood and qi are empty.

The **minute cun pulse** indicates that the yang is deficient (the cun position belongs to yang). There is accompanying fear of cold.

The **minute chi pulse** indicates that the yin is deficient (the chi position belongs to yin). There is usually accompanying fever.

The **minute pulse in men** indicates deficiency and weakness due to fatigue.

The **minute pulse in women** usually occurs after uterine bleeding.

The **moving pulse** indicates stagnation of yang qi at the level of the blood.

The **moving cun pulse** occurs during non-stop sweating which is also called movement of yang.

The **moving chi pulse** occurs during a constant high fever which is also called movement of yin.

The **moving guan pulse** indicates pain and palpitations, heavy bleeding or blood in the stools.

The **leather pulse** occurs if the body structure is cold and deficient (fear and fright cause palpitations and disturbance), when perverse yin moves internally.

The **leather pulse in men** occurs after severe damage to the jing.

The **leather pulse in women** occurs after severe blood loss, when the blood and qi are deficient and there is penetration by perverse cold. In this case, the deficiency and cold fight each other.

6.8 The Hasty, Knotted and Intermittent Pulses and Their Associated Diseases

The **hasty pulse** occurs whenever excessive yang heat damages the yin, for example, in lung carbuncles with symptoms such as tidal fever, coughing, spitting of sticky, bad smelling mucus, or chest pain, and also in yang poisoning with purple skin spots, sore throat and possibly vomiting of blood.

The **knotted pulse** results whenever excessive perverse yin qi coagulates. This can occur in hernia swelling or pain in the testes extending to the lower abdomen, swelling of the testes, intermittent accumulation in the abdomen, qi, blood, phlegm or food stasis, or palpitation disturbance.

The **intermittent pulse** occurs when the yuan qi is failing. If there are symptoms of chronic diarrhea with blood and pus in the stools, caused by severe damage to the yuan qi, or chronic yang deficiency palpitations caused by a cold injury, or extremely severe morning sickness and vomiting (caused by qi stasis) after three months of pregnancy, the pulse is intermittent. This occurs because the channel qi cannot communicate with the mai qi.

The Pulse in Complicated Diseases

All diseases are divided into yin and yang types according to their symptoms. Pulses are also divided into yin and yang types according to their nature. Normally, a yin disease has a yin pulse and a yang disease has a yang pulse. This is called "going with the current." However, when a yin disease has a yang pulse, or a yang disease has a yin pulse, it is unusual and is called "going against the current."

7.1 Symptoms and Pulses in Stroke

Stroke results from perverse qi causing sudden damage, and is divided into wind stroke, phlegm stroke, qi stroke, corpse-like stroke, etc.

• Wind Stroke

Wind stroke results from penetrating wind and usually occurs with a pre-existing deficiency of qi and blood.

The associated pulse is usually leisurely and floating. The floating pulse is an expression of perverse wind and the leisurely quality indicates that the body's upright qi is still strong. This pulse "goes with the current" and is the most commonly seen pulse in wind stroke.

However, if the pulse is firm, strong and rapid, it indicates an excess of perverse qi in the body and reflects an unfavorable prognosis.

• Phlegm Stroke

Phlegm stroke usually has an associated slippery, floating pulse. It occurs when symptoms of wind stroke — collapse and coma — are found with excessive phlegm obstructions.

• Qi Stroke

The pulse in qi stroke is deeper than the phlegm or wind stroke pulse and is slow. Qi stroke occurs after emotional disturbances cause a diminishing of the qi of the zang and fu, resulting in symptoms of sudden collapse and ice cold body without phlegm.

• Corpse-like Stroke

In this disease, the pulse is sinking and slippery. The condition occurs when a person who has a pre-existing qi and blood deficiency is subjected to attacks by unseasonal perverse qi (wind-cold in summer). It is identified by symptoms of sudden collapse and because of diminished breathing, the pulse is the only indicator that the person is still alive.

In any type of stroke, when perverse qi penetrates into the five zang, the body and limbs become cold. However, if perverse qi penetrates into the six fu, then even though a person can go into a coma, the body remains warm.

Traditionally, wind stroke and phlegm stroke are called "true wind stroke" while qi stroke and corpse-like stroke are called "pseudo wind stroke." Both classes can cause sudden coma but only "true wind stroke" can cause Bell's palsy or paralysis.

7.2 Symptoms and Pulses Common in Attack by External Perverse Qi

External attacks of perverse qi include energies of wind, cold, summer heat and dampness. In each case the pulse and symptoms are distinctly different.

• Attack by External Perverse Wind

During the initial attack most of the damage occurs at the wei qi and results in spontaneous perspiration. The pulse is floating and leisurely.

• Attack by External Perverse Cold

During the initial attack most of the damage occurs at the ying qi. The pulse becomes floating and tight, but in this case, there is no perspiration.

Wind has a dispelling nature and cold has a contracting nature. Therefore, in external diseases, if injury is due to wind, there is a floating, leisurely pulse with perspiration and if injury is due to cold, there is a floating, tight pulse without perspiration.

• Attack by Summer Heat

Summer heat has an expansive nature and can easily scatter the upright qi. Even though there is heat in the body, the pulse is empty.

• Attack by External Perverse Damp

Perverse damp can easily become blocked at the level of the blood, restricting its circulation. In most cases the pulse becomes thin, leisurely and choppy.

• Damage by Perverse Cold

Cold is a yin type perverse qi, but can develop into a hot (yang type) disease.

When the pulse becomes floating and rapid, prognosis is favorable, indicating yang symptoms with yang pulses.

However, if the pulse is sinking, minute, choppy and small, it indicates yang symptoms with yin pulses. This means excessive perverse heat is present and has caused severe damage to the upright qi. This type of disease is more complex and prognosis is unfavorable.

In most external attacks, once perspiration occurs, the body cools down and the pulses become calm, indicating that the perverse qi has dispersed.

However, if the heat remains even after perspiration, and the pulse fails to calm, becoming more rapid, it indicates that the disease is continuing to develop and the prognosis is poor.

7.3 Symptoms and Pulses of Internal Damage

The most common internal injuries are caused by diet or fatigue. These can cause damage to the qi or blood levels with phlegm, fire, cold, dampness, etc.

• Internal Injuries Caused by Dietary Factors

When dysfunction is due mainly to food stagnation, the guan pulse on the right hand side is affected. Because of the excessive perverse qi, it is always strong, as well as rapid and slippery.

• Internal Injuries Caused by Fatigue

Fatigue with Deficiency

In this disease both deficient and excess symptoms occur simultaneously.

When dysfunction is due mainly to deficiency damage, the spleen pulse is big but weak and empty.

Emotional frustration or irregular lifestyle with careless eating habits always damage the upright qi which results in fatigue. The symptoms are shallow breathing, aversion to speech due to tiredness, dyspnea on exertion or external heat with spontaneous perspiration and irritability.

If the qi level has been severely damaged, the pulse is usually sinking and thin and can only be felt when strong pressure is applied.

Chronic damage to the qi level is reflected in a pulse which is usually hidden or very weak and choppy. This indicates that the disease is in the process of becoming deeper.

If the blood level has been injured, bleeding usually occurs and the pulse becomes hollow.

Fatigue with Excess

If perverse fire stagnates internally, the pulse usually becomes deep and full.

If tan yin accumulates, the pulse usually becomes slippery.

If food accumulates, the pulse usually becomes tight.

If yin fire accumulates internally, the pulse usually becomes slippery and rapid.

If perverse dampness accumulates and obstructs, the pulse usually becomes soft and thin.

If water fluids accumulate, the pulse usually becomes wiry.

If there are internal excesses of yin cold, the pulse usually becomes wiry and tight.

If fatigue is accompanied by attacks of external perverse wind, the pulse is usually floating and slippery.

If fatigue is accompanied by internal stagnation of qi, the pulse usually becomes sinking and slippery.

If fatigue is accompanied by food injuries, the pulse usually becomes short and very rapid or speeding.

The symptoms associated with fatigue are always clinically detectable.

7.4 Symptoms and Pulses of Malaria, Diarrhea and Dysentery, Vomiting and Cholera

◦ Malaria

Malaria victims usually have a wiry pulse. However, because malaria is an alternating hot and cold disease, it can be either wiry and rapid or wiry and slow. If the pulse is wiry and rapid, it indicates excessive perverse heat and conversely, if it is wiry and slow, it indicates excessive perverse cold. By differentiating these pulses, malarial patterns (hot or cold) can be identified.

Malaria symptoms usually indicate excessive perverse qi. Therefore besides being either wiry and rapid or wiry and slow, the pulse is usually also strong. There are excessive symptoms with full pulses.

If a knotted or scattered pulse suddenly appears, it indicates severe deficiency, where the perverse qi has not been fully dispersed and the upright qi has failed. This is reflected in excessive symptoms with deficient pulses and in such a case the prognosis is poor.

◦ Diarrhea and Dysentery

Diarrhea and dysentery usually result from damaged stomach and intestinal functions. After loss of transforming ability, symptoms of wind, damp, cold, heat, etc. can develop. The pulse is normally sinking, thin, slippery and without strength indicating deficiency and damage in the stomach and intestines.

A pulse which is full and big or floating and rapid, accompanied by symptoms of heat, indicates a rapidly developing disease. In this case it means the upright qi has failed and the perverse qi is excessive. Such a condition is quite severe.

◦ Vomiting

Vomiting is caused by upward counterflow of stomach qi and can easily damage the *Jin-Ye*.

When the pulse is floating and slippery, it indicates the jing qi has only received minor damage and the prognosis is favorable.

A pulse which is wiry, rapid, tight and choppy, accompanied by constipation, indicates severe qi deficiency, dehydration of jin and continued presence of perverse heat. In such a case, prognosis is poor.

◦ Cholera

Cholera is an infectious disease heralded by an acute onset. Characteristically, toxins create vomiting above and diarrhea below.

If the pulse is flooding and big and the four limbs are warm, prognosis is favorable.

If an intermittent pulse suddenly appears, it indicates a disorder of the spleen and stomach with an inability to divide the pure from the impure. This interrupts the mai qi and causes the pulse to become irregular but should not be regarded as a fatal symptom.

If the four limbs are icy cold and the pulse is slow and weak, it indicates failure of yang qi and abundant perverse cold. In this case, prognosis is poor.

7.5 Symptoms and Pulses in Coughing and Dyspnea

◦ Coughing

Coughing is caused by upward counterflow of lung qi. According to the *Su Wen* theory of coughing, "Accumulations in the stomach close to the gate at the lung." This means that coughing occurs because of accumulations of perverse qi in the stomach which follow the lung channel and force the qi upwards.

In lung diseases, the pulse is usually floating, and it follows that coughing usually produces a floating pulse.

If coughing occurs with a sinking, thin pulse, it indicates that the stomach and lung qi have been severely damaged.

If coughing occurs with a sinking, thin, tight pulse, it indicates that severe perverse qi has entered the lung. There is a deficiency of upright qi and an excess of perverse qi. Prognosis is unfavorable.

On the other hand, if coughing occurs with a floating, soft pulse, it indicates that even though the lung qi is weak and deficient, the perverse qi is not severe and prognosis is favorable.

◦ Dyspnea

When lung qi is unable to descend, it causes an upward counterflow. In a mild case this results in coughing, but in a severe case, it causes dyspnea. In dyspnea both shoulders are raised to open the lungs and facilitate penetration of air.

The dyspnea pulse is usually floating and slippery, indicating wind and phlegm stagnation in the lungs which prevent the lung qi from descending. Dyspnea can be relieved by dispersing the wind and phlegm. In this disease the symptoms are excess, with an excess pulse, and thus the pulse goes "with the current."

If the pulse is sinking, choppy and scattered, it indicates extreme weakness of lung qi and severe yang deficiency. The four limbs lose the warmth of nourishment and become icy cold. This pulse goes "against the current," so treatment is difficult.

7.6 Symptoms and Pulses in Fire (Heat), Steaming Bone Heat and Fatigue

◦ Fire (Heat)

Any fire (heat) disease which has a flooding, rapid pulse is a simple disease and easy to treat. These are hot symptoms with hot pulses.

If the pulses are sinking and minute, it indicates the disease originates from deficient heat rather than excessive heat.

If the pulses are scattered and without root, the disease is caused by yang deficiency and qi prolapse and is therefore dangerous.

• Steaming Bone Heat

The bone marrow in the bone is formed by the kidney jing qi. If the jing and bone marrow are strong enough, the bone is also strong. However, if the jing and bone marrow are deficient, qi transforms into heat and perverse heat steams up from the bones.

Heat steaming up from the bones indicates yin deficiency with yang excess. This usually results when the kidney yin has become deficient and is unable to hold the yang, allowing the yang to become excessive.

The pulses are usually empty and rapid — emptiness reflecting yin damage, rapidness reflecting excessive yang.

A high fever with an accompanying choppy, thin pulse means that the yin jing is deficient. If the jing becomes deficient but the perverse heat not fully dispersed, it can lead to separation of yin and yang with a complete failure of jing qi. At this stage the disease becomes critical.

• Fatigue

There are five types of fatigue (lung, kidney, liver, heart and spleen) and six types of extreme fatigue (blood, tendon, flesh, qi, bone and jing) all of which have symptoms of deficiency because the yin jing and yang qi have been damaged. The pulses are therefore empty and usually floating and soft or minute and soft.

In cases of fatigue where both guan pulses are wiry and the spleen and stomach functions are failing, it indicates that excessive liver yang has damaged the middle heater.

When fatigue occurs with a rapid pulse, it indicates extreme deficiency of the yin with excessive yang which has transformed into fire.

7.7 Symptoms and Pulses in Bleeding and Extravasated Blood

◦ Bleeding

Disorders which result in bleeding include vomiting of blood, blood in the stools and uterine bleeding.

After severe bleeding, blood fluids are empty so the pulse becomes hollow.

During bleeding, the pulse is usually felt as leisurely and thin.

In these cases the symptoms are deficient with corresponding weak pulses. Thus, the disease is easy to treat.

If bleeding occurs with a rapid and big pulse it indicates that perverse heat is still developing and there may be further loss of blood. Such a patient needs intensive care.

◦ Extravasated Blood

When extravasated blood coagulates internally the pulse is usually firm and big — excess symptoms with excess pulses. The prognosis is favorable.

However, if there is a deficient pulse such as a sinking, thin, choppy or minute pulse, it indicates continuing excesses of perverse qi with severely damaged yang qi. In this case the symptoms are excessive and the pulses deficient. It is difficult to dispel the perverse qi or reinforce the yang, so prognosis is poor.

7.8 Symptoms and Pulses in Spermatorrhea and Vaginal Discharges, Triple Parching (Diabetes), Urinary Compromise and Constipation

◦ Spermatorrhea and Vaginal Discharges

Spermatorrhea and vaginal discharges are fundamentally deficiency symptoms, so they are usually found with minute, choppy and weak — deficiency — pulses.

Spermatorrhea usually results from a deficiency of yin and an excess of fire whereas vaginal discharges occur when damp heat pours downwards.

Flooding, hollow pulses or rapid, soft pulses can also be found in these conditions. Pulses which are flooding or rapid are caused by excessive fire heat, while pulses which are hollow or soft are caused by deficiency of jing fluid.

◦ Triple Parching (Diabetes)

In the condition of upper parching, symptoms include thirst even after much drinking; in middle parching, hunger even after much eating; and in lower parching, drinking excessively and excess urination.

Triple parching is commonly caused by excessive dry heat. The pulse is therefore usually floating and big or rapid and big, in which case the prognosis is favorable.

When there is a deficiency pulse, such as a thin, minute or choppy pulse and the patient is emaciated, it indicates severe damage to the jing qi and great caution should be taken by the physician.

◦ Urinary Retention

Urinary retention incorporates difficulty in passing urine and anuria.

When urinary retention occurs (either difficulty in passing urine or anuria) and the tip of the nose is yellow, it indicates excess damp heat in the spleen and stomach. If the corresponding pulse is rapid and big, the prognosis is favorable.

On the other hand, if the pulse is choppy and thin, it indicates that the jing and blood have been severely damaged. This is a severe condition in which the jin (fluid) cannot be transformed by qi.

◦ Constipation

Before treating constipation, it must be determined whether perverse dry heat is knotted at the qi or blood.

When knotting occurs at the qi, it is called yang type knotting and is caused by dry heat damaging the jin. The pulse is rapid and full.

When knotting occurs at the blood, it is called yin type knotting and it takes place when the yin dries up and is unable to provide nourishment. Thus, the pulse is slow and choppy.

7.9 Symptoms and Pulses in Insanity, Madness and Epilepsy

◦ Insanity

Insanity is caused by excessive impure phlegm — perverse yin qi which obstructs the mental process. Its main symptoms include divigation with unrestrained laughter and weeping.

◦ Madness

Excessive fire (heat) — perverse yang qi — can transform into phlegm. When this phlegm obstructs the openings (in the heart), it causes loss of mental control which develops into madness.

In madness, the main symptoms include anger and continual irrational cursing of others. These symptoms are caused by excessive perverse qi which has not discharged.

If the pulses are flooding and floating — excess symptoms with excess pulses — the disease is easy to treat and prognosis is favorable.

If the pulses are sinking and quick (rapid, very rapid or speeding), it indicates a deep internal condition. In such cases, the disease is difficult to treat and prognosis is poor.

◦ Epilepsy

Epilepsy is caused by deficiency and weakness of the heart and shen with disturbance caused by wind and phlegm.

When the pulse is empty, the main problem indicated is deficient heart qi. The perverse wind and phlegm are not severe, and in such a case, prognosis is good.

However, if the pulse is full and quick, it indicates excess perverse wind-phlegm, and in this case, prognosis is poor.

In any of these disorders:

If the pulses are floating, there are yang symptoms.

If the pulses are sinking, there are yin symptoms.

If the pulses are slippery, there are phlegm symptoms.

If the pulses are rapid, there are hot symptoms.

These pulses indicate the same type of disorder in almost any condition.

7.10 Symptoms and Pulses of Throat Bi, Dizziness and Headache

• Throat Bi

Throat bi occurs when the throat becomes obstructed and its main symptoms are swelling and soreness of the throat with red complexion and swelling of the parotid glands. Sometimes the throat becomes so swollen that it is difficult to swallow, even fluids. It is usually caused when internal excess of yin fire combines with an attack of external perverse wind and cold.

A rapid pulse indicates heat.

A slow pulse indicates fire obstructed by cold.

In "binding throat wind" the main symptom is swelling extending to the front of the neck. Redness and swelling occurs in the throat and can also be detected at the anterior neck. Other symptoms are tightness, numbness and itching in the throat, wheezing caused by phlegm, obstructing the qi, greenish fingers, strong heat in the palms of the hands, high fever and fear of the cold. The limbs can also become cold. This disorder is caused by emotional disturbance, followed by an attack of toxic wind heat.

A sudden onset of bi in which symptoms are very acute is called "galloping horse throat bi." It usually results from accumulated fire in the liver and spleen.

In all cases toxic heat attacks internally. If the pulse is minute and hidden, it indicates weakness and failure of jing qi. The toxins expand and treatment becomes difficult.

• Dizziness

The initial causes of vertigo and syncope are very complex. However, these conditions usually occur when the jing qi is deficient and damaged or when phlegm fire attacks upwards.

In phlegm types, the pulse is slippery and full.

In fire types, the pulse is flooding and rapid.

If the pulse of the left hand is choppy, it usually indicates extravasated blood.

If the pulse of the right hand is empty and big, it usually indicates qi deficiency.

◦ Headache

Pain in general is reflected in a tight rapid pulse. The headache pulse is usually wiry, but other differentiations are listed below.

Headaches with a floating pulse are usually caused by external perverse wind attack, main symptoms are cramping, fear of wind and perspiration.

Headaches with a tight pulse are usually caused by attack of external perverse cold. The main symptoms are tightness around the head, fear of cold and absence of perspiration.

Headaches with a flooding pulse are usually caused by heat. The main symptoms are swollen pain in the ear and forehead and fear of heat with or without perspiration.

Headaches with a thin pulse are usually caused by dampness. The main symptoms are heavy sensations in the head which become more severe in overcast or rainy weather.

Headaches with a weak, leisurely pulse are usually caused by summer heat. The main symptoms are sensations of empty pain in the head, perspiration and fear of heat.

Headaches with a slippery pulse are usually caused by phlegm. The main symptoms are swooning sensations and heavy pain in the head, irritability and nausea.

Headaches with a wiry, soft pulse are usually caused by qi deficiency. The main symptom is increased pain on physical exertion.

Headaches with a minute, choppy pulse are usually caused by blood deficiency. The main symptoms are pain along the posterior hairline and being constantly alarmed.

Headaches with a wiry, firm pulse are usually caused by oppressed kidney qi. The main symptoms are intermittent, pulling pain along the root of the teeth, which becomes more severe at night, and fear of cold but no fear of heat.

Headaches with a short, choppy pulse are "true headaches." The main symptoms are pain along the inside of the brain and ice cold limbs.

7.11 Symptoms and Pulses in Heart Pain, Hernia Pain and Lower Back Pain

- **Heart Pain**

There are nine traditional types of heart pain.

The main symptoms of **fluid pain** include pain accompanied by borborygmus, sensations of fullness and swelling, diminished ability to receive food and edema at the bridge of the foot.

The main symptoms of **food pain** include tight pain, vomiting acid reflux and belching with rotten smell.

The main symptoms of **cold pain** include cold abdomen with pinching pains and cold limbs.

The main symptoms of **hot pain** include burning pain in the chest, nausea, thirst and constipation.

The mains symptoms of **qi pain** include intermittent, wandering pain with fullness and swelling.

The main symptoms of **blood pain** include painful, hard lumps in the abdomen which spread into the ribs.

The main symptoms of **worm pain** include pain with palpable rope-like swellings in the abdomen which disappear when the pain stops, and possibly vomiting of worms or worms in the feces.

The main symptoms of **palpitation pain** include pain with pulsations around the navel which appear during exertion, red face and heavy head.

The main symptoms of **spreading pain** include pain accompanied by loss of consciousness with delirium and closed jaws. These symptoms are caused by toxic qi.

These are the nine types of heart pain, but heart pain actually means pain in the central abdomen.

If the pulse is thin and slow, it indicates upright qi is deficient and perverse qi is mild. Therefore prognosis is good.

If the pulse is floating and big, it indicates upright qi is deficient and perverse qi is very severe. Therefore prognosis is poor.

◦ Hernia Pain

In hernia pain there are symptoms of sudden, acute pain in the lower abdomen, with ice cold limbs and in some cases, pain or swelling in the testes.

This type of pain is always accompanied by tightness or a hard mass, which begins in the upper abdomen and runs downward. It is usually caused by accumulation and stagnation of cold damp. When impure fluids accumulate, they obstruct the channels and blood vessels.

In less severe cases obstructions are caused by damp heat. This means there are internal accumulations, the channels go into spasm, circulation is obstructed and pain is created.

The pulse is usually strong, wiry and rapid. If the pulse is firm and rapid, it indicates internal excess of yin cold. Use the warming method to scatter the cold perverse qi and aid recovery.

If the pulse is weak and rapid, it indicates the yang qi has already become severely deficient and the cold, damp, yin perverse qi has become excessive. In such a case, treatment is very difficult.

◦ Lower Back Pain

This disorder usually results from deficiency causing damage to the kidney zang. When yang deficiency allows perverse wind, cold, dampness and phlegm to penetrate, the channels become obstructed causing pain.

The primary cause of lower back pain is internal injury, reflecting in the pulse which is usually sinking and because of the pain, wiry. These pulses commonly appear in all types of lower back pain.

Where you find a sinking pulse combined with a floating pulse, plus pain which extends to the right and left sides with stiffness of the legs and knees, it indicates perverse wind.

When the pulse is sinking and tight and the pain is accompanied by stiffness in the back with cold sensation in the legs and fear of cold, it indicates perverse cold.

When the pulse is sinking, wiry and slippery and pain is accompanied by swelling and pale skin, it indicates phlegm.

When the pulse is sinking, soft and thin, and pain occurs with cold sensations in the loins, with feelings of heaviness and edema in the lower limbs, it indicates kidney yang deficiency and water flooding.

When the pulse is sinking, empty and big, and the pain is mild with weakness and soreness in the lower back, it indicates kidney deficiency.

When the pulse is sinking and full and pain is accompanied by inability to straighten the back or twist at the loins, it usually indicates external trauma.

7.12 Symptoms and Pulses in Beriberi, Wei, Bi and Jaundice

◦ Beriberi

Beriberi occurs when cold-damp or damp-heat penetrate the calf muscle.

The main symptoms are numbness, aching and cold cramps in the lower legs with thinning or swelling from the toes to the knees. Sometimes, thinning is accompanied by sensations of qi rushing up from the legs to the abdomen or to the heart and chest area. This is called beriberi attacking the heart.

Beriberi is clinically divided into four types.

If the pulse is slow it indicates excessive perverse cold damp.

If the pulse is rapid it indicates excessive perverse damp heat.

If the pulse is floating and slippery it indicates excessive perverse wind damp.

If the pulse is soft and thin it indicates excessive perverse dampness.

◦ Wei (Atrophy and Paralysis)

The wei syndrome is characterized by weakness in the arms and legs with flaccid joints which are difficult to move. Its common cause is dry heat in the lung and stomach which damages the jing qi. It leads to atrophy and paralysis of the tendons, bones, blood vessels and muscles.

The pulse is usually minute, weak, slow and leisurely.

If the pulse is choppy, thin, tight and soft it indicates deficiency of jing blood, which would mean the tendons, bones and blood vessels are undernourished.

◦ Bi (Numbness and Pain)

Bi results from damaged qi-blood which occurs when weak muscle texture allows wind, cold and damp to penetrate and obstruct the circulation through the channels.

Symptoms usually include pain in the large and small joints with difficulty in movement, or numbness and pain at a fixed location, or sensations of heaviness over the whole body, or edema of the lower limbs with cold, distorted joints.

The pulse is usually floating, choppy and tight. A choppy pulse indicates deficiency of qi-blood. A floating tight pulse indicates the presence of perverse wind, cold and dampness in the channels.

◦ Jaundice

Jaundice is also called yellowing. The main symptoms are yellow skin and eyes.

It is usually caused by an obstruction of accumulated damp heat generated by impurities in the stomach and bowels.

In this case the perverse qi is excessive, so the pulse is always full, flooding and rapid.

Traditionally, jaundice is divided into five types.

The main symptoms of yellow jaundice are bright yellow skin, eyes and urine with fever. These are caused by excessive heat.

The main symptoms of wine jaundice include yellow skin, physical discomfort, nausea, abdominal fullness and difficulty in passing urine. These symptoms are caused by toxic dampness becoming obstructed in the abdomen.

The main symptoms of food jaundice include yellow skin, urinary retention, poor digestion and stuffy sensations in the chest, sometimes with intermittent dizziness which occurs after eating. These symptoms are caused by stagnation of food generating impure qi in the stomach and thereby creating accumulation.

The main symptoms of fatigue jaundice include yellow skin, black forehead and stools, and heat in the palms of the hands and soles of the feet which becomes more severe at night. These symptoms are caused by excessive sexual intercourse and accumulation from extravasated blood.

The main symptoms of black jaundice include yellow skin, green eyes, black complexion and stools, hot sensations in the heart and chest and numbness in the muscles. These symptoms are caused when wine jaundice or fatigue jaundice are incorrectly treated.

In any type of jaundice, when the pulse becomes choppy and minute, it indicates deficiency of jing qi. Non-stop thirst indicates excessive perverse heat with drying up of the jing and jin — the perverse qi is excessive and the true qi is failing. The prognosis is poor.

7.13 Symptoms and Pulses in Edema and Fullness and Swelling

• Edema

Edema usually results when excessive damp-yin perverse qi becomes obstructed and causes swelling in the muscles. Because of the excesses of yin perverse qi, the pulse usually becomes sinking. (It can be sinking and thin, sinking and tight, sinking and rapid or sinking and slow.)

When edema occurs with a floating pulse, it is either qi or wind edema.

In qi edema, symptoms include thick skin, pallor and swelling which appears first on the upper body and then moves downward, covering the entire body.

In wind edema, symptoms include swelling in the face and eyes, painful body joints and bones, sensations of heaviness in the body, fear of wind and sweating.

If edema occurs with a sinking pulse, it usually indicates "stone" edema or internal edema.

In "stone" edema symptoms include hard stone-like lumps in the lower abdomen and dull sounds on auscultation.

In internal edema, symptoms include facial swelling, swelling of the eyes and entire body, yellowing skin and retention of urine.

A sinking rapid pulse usually indicates edema due to yin deficiency. The main symptoms include trunk swelling, thirst, red urine with burning sensations and constipation.

A sinking slow pulse usually indicates edema due to yang deficiency. Symptoms include swelling over the entire body, soft stools or diarrhea and scanty urine.

When analyzing edema, the disorder is not very severe if the related pulse is floating and big. The excess pulses correlate with excess symptoms, the upright qi has not been damaged by the perverse attack, and the treatment is straightforward. However, if the pulses are empty and thin, it indicates an excess symptom pattern with deficient pulses. The upright qi has been damaged and prognosis is poor.

◦ Fullness and Swelling

Fullness and swelling usually occur when sluggish liver qi impedes circulation and causes deficiency and weakness of the spleen and stomach. This prevents food from transforming into pure qi and allows impure qi and perverse damp to accumulate. This disorder is known as "damage to the spleen by overcontrol of the liver."

Because fullness and swelling commonly occur with excessive liver and weak spleen, the pulses are usually wiry with the liver pulse showing up stronger.

When fullness and swelling occur with a rapid, flooding pulse, it indicates internal congestion of damp heat and stagnant impure qi blockage in the chest and abdomen.

Fullness and swelling with slow, weak pulses indicate an accumulation of yin cold perverse qi which cannot be discharged due to a severe deficiency of yang qi.

A floating, thin pulse indicates a deficiency swelling.

Symptoms include pale yellow urine, loose stools which are dull in color and tiredness with aversion to speech.

A tight, rapid pulse indicates an excessive swelling. Symptoms include urinary retention, constipation, firm swelling and dyspnea caused by qi counterflow.

In diseases with fullness and swelling, external symptoms include tightness at the skin with internal deficiency. These symptoms indicate an excess with a deficient root and mean that even though fullness and swelling occur when stagnant, impure dampness accumulates in a congealed, firm mass, there is an underlying weakness and deficiency of the spleen and stomach. This is called "central excess with true deficiency."

In diagnosing these conditions, a floating, big pulse indicates that although the perverse qi has not diminished, the upright qi has not been damaged. In this case, treatment is possible.

An empty, thin pulse indicates damage and failure of upright qi which makes it difficult for the body to resist perverse qi. Prognosis is poor.

7.14 Symptoms and Pulses in Accumulation and Stagnation and Attacks by Perverse Evil

• Accumulation and Stagnation

Lumps caused by phlegm or coagulated blood which are stationary and elevated are called accumulations and are usually associated with diseases of the five zang.

Lumps which are mobile, appear intermittently and are sometimes painful are called stagnations and are usually associated with diseases of the six fu.

It is generally agreed that both these symptoms result from an underlying weakness and deficiency of the stomach and spleen in combination with an attack of the perverse qi of the four seasons. When upright qi is weak, it is easy for perverse qi to accumulate or stagnate.

In accumulations or stagnations, if the pulses are full and strong, it indicates that the upright qi has not yet been damaged. In such cases, the disease is not at a severe stage.

However, if the pulses are sinking and thin, it indicates that the upright qi is deficient and damaged. In such cases the disease has reached a more severe stage.

◦ Attacks by Perverse Evil

These attacks usually take place after an illness which is characterized by sudden fainting. It produces swelling in the abdomen.

If the pulses are tight and thin, it indicates that although there is a weakness of upright qi, perverse qi is not strong enough to take hold and treatment is likely to be successful. Prognosis is good.

If the pulses are floating and big, it indicates that perverse qi has penetrated deeply and the disease is more serious.

7.15 Symptoms and Pulses in Yong Abscesses, Ju Abscesses and Sores

◦ Yong Abscesses

Yong abscesses are formed by accumulated toxic heat overflowing from the stomach into the blood vessels. This obstructs the blood fluid and causes disharmony.

Yong abscesses usually manifest with symptoms of elevation, redness, burning pain (due to excessive heat) and thinly stretched skin (pointing). Rupture occurs easily. These are yang symptoms.

• Ju Abscesses

Ju abscesses form at scratch scabs or are caused when toxins from anthrax pustules gradually penetrate the muscles, tendons and connective tissues. Some heat is generated, but is not severe.

In the area around which ju abscesses occur, the skin becomes tough, but redness, swelling, fever and pain are minor and sometimes do not occur at all. These are yin symptoms.

This explains the basic difference between yong and ju abscesses — one being a yang syndrome, the other yin.

• Sores

Large yong-ju abscesses, which are usually called sores, have firm deep roots, are soft on the external level but hard internally. Their surfaces are pus-free and smooth. They form when emotional imbalance allows impure dampness to accumulate and generate toxins which block the jing mai and cause stagnation.

If the pulses are floating and scattered with symptoms of high fever and fear of cold, the disease is still at its preliminary stage.

At this stage, a sore may develop wherever pinching pains are felt, because it is at these sites that toxins affect the jing mai and disturb the circulation of ying-wei. Symptoms are usually superficial.

If, after a sore has formed, symptoms of high fever and painful swelling with a rapid pulse occur, it indicates yang symptoms with excessive yang perverse heat.

On the other hand, if these symptoms are absent it indicates yin symptoms with excessive yin perverse cold.

In a yong-ju abscess if there is no leakage of pus but a flooding, big pulse, it indicates yang symptoms. Such a yong-ju abscess will soon erupt, discharging its toxic heat. The disease is not dangerous.

If a yong abscess has already ruptured but the pulse remains flooding and big, it indicates that the qi and blood have been damaged but the toxins have not been discharged. This disease is dangerous, but once the heat has been cleared and the toxins have been neutralized, by supporting the upright qi, the condition can be easily stabilized.

7.16 Symptoms and Pulses in Lung Abscess, Lung Atrophy and Appendicitis

◦ Lung Abscess

The main symptoms of lung abscess are coughing, dyspnea, chest pain and vomiting of impure phlegm and bloody pus.

These symptoms are usually caused by accumulation of impure phlegm and steaming heat in the lung.

After an abscess forms, toxic heat becomes abundant internally and the cun pulse usually becomes rapid and full.

◦ Lung Atrophy

Lung atrophy generally occurs when the jin in the stomach and spleen have been damaged and fail to nourish the lung. The lung gradually drys out and symptoms of dyspnea, hoarse voice, difficulty in coughing up phlegm, emaciation, listlessness, fear of cold and tidal fever develop.

Lung atrophy is usually caused by deficiency of jing qi. The pulse, although rapid, is also without strength.

Lung abscess patients have a pale white complexion, indicating weakness and deficiency of qi and blood.

If the pulse is short and rough, the prognosis is favorable.

If the pulse is floating and big, it indicates excessive heat in the lung. There can be vomiting of sticky porridge-like phlegm or pus and blood. In this case the disease is still developing.

◦ Appendicitis

Appendicitis means intestinal abscess. There are symptoms of localized pain and tenderness at a specific part of the abdomen, with difficulty in twisting the trunk, dry rough skin and abdominal swelling with hard lumps which can be felt on palpation. These are formed by accumulated damp heat or extravasated blood in the intestines.

If an intestinal abscess contains excessive heat, the pulse will be rapid and slippery, indicating symptoms of excess.

In the absence of excessive heat, the pulse will be rapid but without strength or hollow and empty and is most easily felt at the guan position. This indicates that the blood fluids have been damaged by leakage of pus.

Intestinal abscesses can also occur with minute, choppy, tight pulses. Minute, choppy pulses indicate deficiency, but tight pulses indicate stagnation of accumulated impure dampness. Prior to suppuration, treat by warming and reducing to disperse the impure dampness.

If the pulses are tight and rapid, it indicates that the pus has already discharged. Treatment must be aimed at reinforcing the upright qi and dispersing the toxins. The strong reducing method cannot be used because it may cause pus to discharge into the intestines.

The Pulse in Pregnancy and Pediatrics

During pregnancy, the pulse is used to determine if the ying blood is deficient, excessive, cold or hot. Since the ying blood plays a more important role in female physiology than in male, its normal and abnormal changes need to be understood.

This task can be approached by considering certain important clinical facts, for instance, when the ying blood is abundant, a woman conceives easily, but when the yang qi is excessive and the ying blood is deficient, conception is difficult. This is because when the ying blood becomes deficient it is unable to nourish the jing, and when the yang qi becomes excessive it can damage the jing.

8.1 The Pulse During Pregnancy

Because the fetus is formed from jing which is nourished by blood, pregnancy can be detected on the *Shao Yin* pulse, at the cun position of the left hand. The beats come and go smoothly and become almost slippery. The pulses at the chi and guan positions also seem smooth and slippery.

These pulses occur because the cun position belongs to the heart, which controls the blood vessels while the chi position belongs to the kidney which stores the jing. In order to form the fetus, the jing and the blood must be in balance.

After three months the pulse at the chi position feels more slippery and rapid, but if slightly more pressure is applied it feels soft and scattered. At this stage the fetus is beginning to be formed but has not yet become strong.

After five months of gradual development the fetus grows stronger. Although the pulse at the chi position remains slippery and rapid, it no longer feels soft and scattered when slightly more pressure is applied.

Because the male and female fetus are different, corresponding differences can be felt on the pulse and abdomen.

If the fetus is male, the left chi pulse feels more slippery and rapid and the abdomen becomes swollen like the base of a wok.

If the fetus is female, the right chi pulse feels more slippery and rapid and the abdomen becomes swollen like a bamboo wheelbarrow.

This is an ancient idea, which may not be completely accurate but is often a helpful guideline.

Just prior to birth the pulse changes slightly and is termed "departure from normal pulse."

Birth will not begin until the bag of waters has broken. If there is no amniotic fluid the labor pains are false; there is no need for alarm.

After delivery of the infant, the blood will be deficient.

If the pulse is leisurely and slippery, it indicates the damage to the qi and blood is not severe.

If the pulse is full, big, wiry and firm or if wind diseases appear — spasms, etc. — it indicates a deficiency of upright qi with excesses of perverse qi. These are symptoms of disharmony.

8.2 Pediatric Pulses

When feeling pulses on infants, only one finger is necessary to check all three pulse positions.

Infants have more rapid pulses than adults. The normal pulse rate between the ages of three and five is seven beats per respiration. If there are eight or nine beats per respiration, it indicates heat. If there are four or five beats per respiration, it indicates cold.

Infant pulses are not as complex as adult pulses. It is enough to check for strong, weak, leisurely and quick pulses.

A strong pulse indicates excess.

A weak pulse indicates deficiency.

A leisurely pulse is normal.

A quick pulse indicates perverse qi.

Besides examining and feeling the pulse, diagnosis can also be made by observation.

◦ Observing the Complexion

A green-white complexion indicates yin perverse qi.

A yellow-red complexion indicates yang heat.

A green complexion indicates wind-perverse liver qi with empty cold spleen and stomach. There are symptoms of pain in the heart and abdomen, fright and convulsions.

A white complexion indicates qi deficiency or qi prolapse or deficiency of spleen and lung. There are symptoms of cold diarrhea and chronic convulsions.

A red complexion indicates phlegm-fire, acute convulsions, cold-knotting constipation or alternating hot and cold.

A black complexion indicates yin cold-damp convulsions and pain.

A yellow complexion indicates accumulation and stagnation, congested blood swellings and excessive spleen diseases.

A fresh red coloring in both cheeks which appears intermittently indicates overflow of yang due to empty yin. This should be differentiated from excessive heat.

◦ Observing the Index Finger

There are three gates on the index finger — the wind gate, qi gate and life gate. By observing the color and length of the vein which passes through them, pediatric diseases can be diagnosed.

A purple vein indicates heat.

A red vein indicates cold.

A green-blue vein indicates wind.

A white vein indicates indigestion.

A black vein indicates attack by perverse evil.

A yellow vein indicates a spleen and stomach disease.

A vein appearing in the area of the wind gate indicates a mild disease.

A vein appearing in the area of the qi gate indicates a stronger disease.

A vein appearing in the area of the life gate indicates a severe disease.

These veins usually appear when infants are suffering from diseases of the stomach and intestines, with diminished digestion causing weakness of qi and blood.

Diagnosing Disorders of the Eight Curious Channels

There are twelve channels in the body, each associated with a zang or fu organ.

The hand *Tai Yin* channel is associated with the lung zang.

The hand *Yang Ming* channel is associated with the large intestine fu.

The foot *Yang Ming* channel is associated with the stomach fu.

The foot *Tai Yin* channel is associated with the spleen zang.

The hand *Shao Yin* channel is associated with the heart zang.

The hand *Tai Yang* channel is associated with the small intestine fu.

The foot *Tai Yang* channel is associated with the bladder fu.

The foot *Shao Yin* channel is associated with the kidney zang.

The hand *Xue Yin* channel is associated with the pericardium zang.

The hand *Shao Yang* channel is associated with the three heater.

The foot *Shao Yang* channel is associated with the gall bladder fu.

The foot *Xue Yin* channel is associated with the liver zang.

These twelve channels are called the main channels. Their diseases are indicated at the cun, guan and chi positions of both hands (see Ch. 2).

Besides these, there are eight other channels known as the curious channels.

Except for *Chong Mai*, *Ren Mai* and *Du Mai* (the three channels which begin at the lower abdomen in the area of the uterus), these eight do not normally communicate with the zang and fu.

The curious channels include *Ren Mai*, *Du Mai*, *Chong Mai*, *Dai Mai*, *Yang Qiao Mai*, *Yin Qiao Mai*, *Yang Wei Mai*, *Yin Wei Mai*.

9.1 Pulses of the Eight Curious Channels

Du mai diseases are evident when the three positions — cun, guan and chi — are floating and uninterrupted. The pulse is also wiry and long.

Chong mai diseases are evident when the three pulse positions — cun, guan and chi — are firm and uninterrupted. Usually the pulse is also wiry and full.

Ren mai diseases are evident when the pulse becomes tight at the cun position. The pulse is also thin, full and long from the cun to the guan position.

Yang qiao mai diseases are evident when the pulse becomes tight at the cun position with beats that vibrate to the right and left.

Yin qiao mai diseases are evident when the pulse becomes tight at the chi position and with beats that vibrate to the right and left.

Dai mai diseases are evident when the pulse becomes tight at the guan position with beats that vibrate to the right and left.

Yin wei mai diseases are evident when the pulses at the chi position seem to roll towards the thumb or up to the cun position and its beats are sinking, big and full.

Yang wei mai diseases are evident when the pulses at the chi position seem to roll towards the little finger or up to the cun position and its beats are floating, big and full.

9.2 Diseases of the Eight Curious Channels

• Du Mai

The du mai runs upward along the spine and governs the yang qi of the entire body. Du mai pathologies usually indicate yang deficiency.

When the yang qi is deficient and weak, it is unable to nourish bone marrow. Therefore, if external perverse qi penetrates, it can cause stiffness of the spine.

When the yang qi is deficient and perverse yin damp phlegm is excessive, epilepsy can occur.

• Ren Mai

The ren mai runs upward along the abdomen and governs the yin blood of the whole body. Ren mai pathologies usually indicate deficient cold at the blood level. When stagnation obstructs circulation, hernias occur.

In cold hernia, there are symptoms of abdominal pain with oppressive coldness and ice cold limbs.

In water hernia, there are symptoms of pain with kidney swelling, yin sweating, damp itching and rumbling in the lower abdomen.

In a tendon hernia, there is pain in the penis which can be stiff or flaccid.

In a blood hernia, there are pinching pains like the tappings of a hammer and swellings which are unbearably painful when touched.

In qi hernia, pain extends from the testicles up to the kidney yu point, or the testicles prolapse, and swelling occurs after anger.

In testicle hernia, intermittent swelling occurs on one side and can, in some patients, change sides.

In lower jiao hernia, men develop swelling in the scrotum with numbness, while women develop prolapse of the uterus or accumulation and stagnation (hard lumps).

• Chong Mai

The chong mai runs upward along the side of the navel and is referred to as the sea of blood. When diseased, qi rises upward and pain occurs in the abdomen.

• Dai Mai

The dai mai encircles the lower ribs. When diseased, symptoms of vaginal discharge, pain in the navel and abdomen or spermatorrhea occur.

• Yang Wei Mai

The yang wei mai runs upward along the lateral side of the leg and regulates the circulation of wei qi. When diseased the wei qi grows deficient and is unable to consolidate the surface of the body.

Symptoms include fear of cold and external diseases with high fever that develops easily.

If wei qi cannot reach the head, there are symptoms of eye dizziness, sudden fainting with stiffening and disorientation.

• Yin Wei Mai

The yin mei mai runs upward along the medial side of the leg, and regulates the circulation of yin blood. When diseased, the yin blood becomes deficient and is unable to nourish the heart.

When the heart becomes under-nourished, the symptoms include heart pain or pinching pain in the chest and ribs, palpitations and restlessness.

• Yang Qiao Mai

The yang qiao mai runs upward along the lateral side of the leg. When diseased, the jing mai above the medial ankles contract and the jing mai above the lateral ankles becomes flaccid. This is called "leisurely yang with yin spasms."

• Yin Qiao Mai

The yin qiao mai runs upward along the medial side of the leg. When diseased, the jing mai above the lateral ankles contract and the jing mai above the medial ankles become flaccid. This is called "retarded yin with yang spasms."

In general, epileptic diseases, spasms, hot and cold diseases, dizziness etc., can all result from pathologies of the eight curious channels. They can, however, cause complex pulses and reflect at different positions. Hence they should be diagnosed with caution.

The Exhausted Pulses

The exhausted pulses are different from the normal and abnormal pulses which always reflect the state of the jing mai. Besides reflecting jing mai pathologies, they also reflect inactivity of the zang fu. They relate to the true qi of the zang fu and therefore appear when the upright qi or yuan qi are severely damaged.

10.1 The Exhausted Pulses of the Zang Fu

◦ The Liver Organ

If the true qi of the liver fails, the pulse feels like a knife edge. It becomes very thin, firm and rapid.

◦ The Heart Organ

If the true qi of the heart fails, the pulse becomes short, hard and quick. It feels like touching a revolving bean.

◦ The Spleen Organ

If the true qi of the spleen fails, the pulse becomes thin and very weak. It is felt between the tendons and the muscles, suddenly appearing and disappearing like birds pecking up grains of rice.

It also feels like a leaky roof. There is a long interval between "drops" and the "drops" have no strength to "splash."

◦ The Lung Organ

If the true qi of the lung fails, the pulse becomes big, empty and soft, like the feather of a bird on the skin — it is floating on the surface without root and scattered.

It also feels like a revolving ma ren (hemp) seed. It is very light, empty and rough (not very round).

Sometimes it feels like waves on the water. It comes and goes quickly but is uneven.

• The Kidney Organ

If the true qi of the kidney fails, the pulse loses its shen, becoming irregular and intermittent. Like a visiting guest, it comes and goes unpredictably. When it comes it is hard, like a stone, when it goes it is like a pool of unraveled rope — scattered and without order.

• The Ming Men

If the true qi of ming men fails, the pulse is felt at the skin level. It feels like a prawn swimming on the surface of the water and then suddenly jumping once.

It can also feel like a fish fin. It is felt at the chi position but not at the cun position. Therefore the head is stationary but the tail moves.

• The Bladder

If the true qi of the bladder fails, the pulse is at the skin level. It feels like a boiling cauldron, it "bubbles" outward but does not contract.

Whenever one of these pulses occurs, it indicates that stomach qi is absent from the channel. Nevertheless, the coloring and symptoms must be carefully analyzed to achieve an accurate diagnosis.

10.2 Exhausted Pulses of Yin and Yang

When the normal relationships between yin and yang break down, diseases result. These diseases can be clearly understood by analyzing the relationship between the symptoms and pulses.

When a yang-hot disease occurs with a yin deficient pulse, the stronger the yang becomes, the weaker the yin becomes. This type of disease is very dangerous.

On the other hand, when a yin-cold disease appears with a yang-hot pulse, yin is transforming into yang. From weakness there is a transformation into overactivity. This is a favorable change. Even if the disease is severe, the prognosis is good.

If the pulse beats only at the chi position and is unable to reach the guan position, it indicates the yin jing has already failed in the lower heater and is too weak to rise upward.

If the pulse beats only at the cun position and is unable to reach the guan position, it indicates that the yang ming qi has already failed in the upper heater and is too weak to descend.

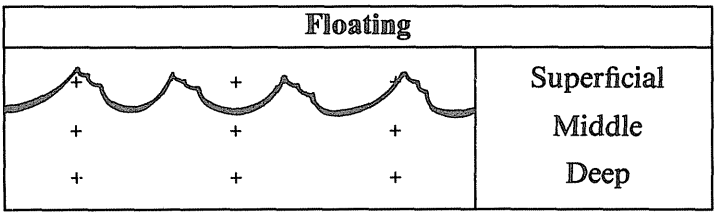
In these two diseases the "yin and yang separate."

If the pulse is deep, hidden and intermittent, it indicates that the true qi of the zang fu has already failed. The entire body is in danger of breaking down.

If the pulse is floating and scattered, but has no root — it cannot be felt under heavy pressure — it indicates that the yang qi is close to failing and the entire body is already suffering from severe damage. This is difficult to treat.

The Twenty-Seven Pulse States

11.1 Floating Pulse



A pulse which feels strong under slight pressure, but loses its strength when pressure is increased, is classed as a floating pulse.

It is steady and moves gently like a slight breeze blowing over a feather on the back of a bird. It feels heavy under light pressure but light under heavy pressure, like a piece of wood floating on water. It is very strong at the surface, but soft and empty at a depth, like the stem of a spring onion.

When felt during autumn, the floating pulse is an indication of health.

When felt after prolonged illness, it sometimes indicates floating yang qi caused by yin deficiency.

Pulse Comparisons

If a floating pulse is bigger than normal but without substance in its center when slightly more pressure is applied, it is called a hollow pulse.

A floating pulse with strong beats is called a flooding pulse. Under light pressure this pulse feels strong as it rises but slow and weak as it falls.

A floating pulse with slow or leisurely beats which feels bigger than normal but lacks strength is called an empty pulse.

A floating pulse which is spongy, weak and thin is called a soft pulse.

A floating pulse which is without root, coming and going without distinct form, is called a scattered pulse.

Clinical Significance

The floating pulse characteristically appears with an excess of yang qi, usually caused by an external attack to the superficial level. However, it can be better understood by considering the accompanying qualities.

The floating pulse which is slow or tight indicates wind cold.

The floating pulse which is rapid usually indicates wind heat. This is also a strong pulse.

The floating pulse which has weak beats indicates an internal disease with blood deficiency.

Cun, Guan, Chi

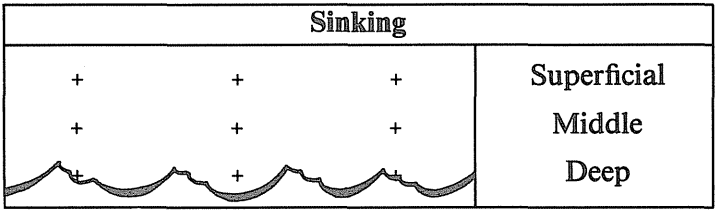
The cun, guan and chi positions are used to diagnose diseases of the upper, middle and lower heaters.

Perverse wind qi which lodges at the upper part of the body, causing headache, or wind heat and impure phlegm which become obstructed at the upper heater — between the chest and diaphragm — causing dizziness, will show up as a floating pulse, usually felt at the cun position.

Deficiency and weakness of spleen qi, affecting the middle heater, or an excess of liver qi, will show as a floating pulse on the guan position.

A lower heater disease which causes difficulty in passing urine or stools will usually show up as a floating pulse felt at the chi position.

11.2 Sinking Pulse



A pulse which cannot be felt unless strong pressure is exerted to the level of the tendons and bones is called a sinking pulse.

It feels like a ball of cotton wool on sand, soft at the surface, but strong and rigid below. It can only be felt when searched for, and is comparable to a stone in water. It is deep and depressed, like water, which sinks by nature.

A sinking pulse which is soft, slippery and constant indicates health.

Yang qi is felt at the cun position and is more important in male than in female physiology. Hence in males, the cun is the strongest of the pulses.

On the other hand, yin qi is felt at the chi position and is more important in female physiology. Hence in females the chi is the strongest of the pulses.

Therefore, provided the beats remain constant throughout the four seasons, it is normal for males to have sinking chi pulses and females to have sinking cun pulses.

Pulse Comparisons

A sinking pulse which is so deep it can only be felt by applying pressure to reach the bone is called a hidden pulse.

A sinking pulse which is thin and soft is called a weak pulse.

A sinking pulse which is wiry, big and strong is called a firm pulse.

Clinical Significance

The sinking pulse usually appears in a disease where yin channel water qi is abundant, sometimes even to the extent of water retention.

The sinking pulse which is rapid indicates internal perverse heat.

The sinking pulse which is slow indicates internal perverse cold.

The sinking pulse which is is slippery indicates internal phlegm.

The pulse which is sinking but lacking strength indicates yang deficiency or sagging of qi.

The pulse which is sinking and strong indicates stagnation or accumulation of cold.

Cun, Guan and Chi

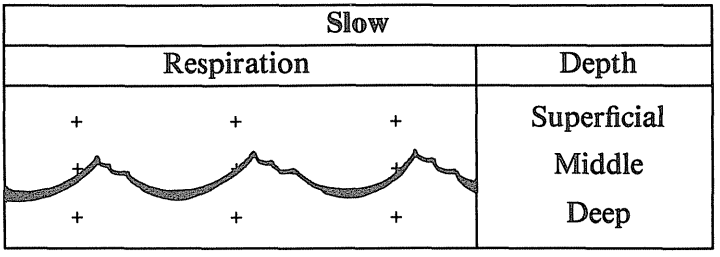
The sinking pulse can be felt at any of the three positions — cun, guan or chi — with each position associated with a specific disease.

A sinking pulse felt at the cun position usually indicates water retention or phlegm obstructed between the chest and diaphragm.

The sinking pulse felt at the guan position usually indicates accumulation and stagnation of pain-inducing cold in the middle heater.

The sinking pulse felt at the chi position usually indicates damaged yuan yang in the lower heater which causes vaginal discharge, incontinence of urine, diarrhea or dysentery, or kidney deficiency lumbago.

11.3 Slow Pulses



A pulse which beats only three times per respiration is called a slow pulse.

It usually results when yang qi is too weak to defeat yin-cold perverse qi, or when deficiency of qi and blood cause a deficient cold condition.

Pulse Combinations

A slow pulse which is floating indicates superficial perverse cold qi.

A slow pulse which is sinking indicates internal perverse cold qi.

To treat these types of deficient yang-excessive yin diseases, the yang qi must be strengthened.

Pulse Comparisons

A slow pulse which is slightly faster (four beats to a respiration) is called a leisurely pulse.

A slow pulse which is thin and minute, lacking strength yet rough and uneven, is called a choppy pulse.

A slow pulse which is floating, big and soft is called an empty pulse. According to tradition, "floating, big, soft, slow pulses are symptoms of deficiency."

Clinical Significance

The slow pulse usually appears in diseases involving the zang fu qi. For instance, in spleen yang deficiency causing excessive damp phlegm, there can be a slow pulse.

The slow pulse which is strong usually indicates internal accumulation of excessive pain-inducing cold.

The pulse which is slow but lacking strength indicates deficiency of yang qi causing deficient cold.

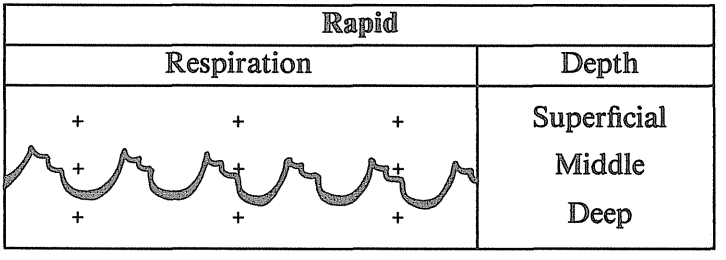
Cun, Guan, Chi

The cun position reflects conditions of the upper heater. Therefore, when perverse cold accumulates at the heart and chest areas, the slow pulse can be felt at both cun positions.

The guan position reflects conditions of the middle heater. Therefore, when accumulated cold damages the spleen and causes painful spasms in the tendons, the slow pulse can be felt at both guan positions.

The chi position reflects conditions of the lower heater. Therefore, when deficiency and failure of kidney fire cause heaviness and pain in the loins and thighs, or incontinence of urine or scrotal hernia, the slow pulse can be felt at both chi positions.

11.4 Rapid Pulse



A pulse which beats six times per respiration is called a rapid pulse.

It results when yang heat is excessive or yin fluid is damaged. Clinically, there are symptoms of restlessness, mental confusion and delirium.

Pulse Combinations

A rapid pulse which is floating usually indicates superficial heat.

A rapid pulse which is sinking usually indicates internal heat.

A rapid pulse which is strong indicates excessive heat.

A rapid pulse which lacks strength indicates deficiency heat.

In adults the rapid pulse indicates heat. However, in infants a pulse with six beats per respiration is normal.

Pulse Comparisons

An impatient pulse which is taut and vibrates to the left and right like a tightly stretched rope, but does not have six beats per respiration, is called a tight pulse.

A rapid pulse which is intermittent is called a hasty pulse.

A rapid pulse which can be felt only at the guan position is called a moving pulse.

Clinical Significance

The rapid pulse usually occurs when yang qi is excessive. This can occur in heart or kidney fire and can be either a deficient or excessive condition.

The rapid pulse which is big and strong indicates excessive fire and is treated by cooling and reducing.

The rapid pulse which is minute and lacking strength indicates deficiency of fire and is treated by warming and reinforcing.

In traditional Chinese medicine, lung qi concords with autumn. During deep autumn the weather becomes dry and aggravates lung diseases, especially those related to lung yin deficiency. Therefore, if the rapid pulse appears during autumn, it indicates excess internal fire burning the lung yin. This type of disease is difficult to treat.

Cun, Guan, Chi

A rapid left cun position pulse indicates an upper heater disease with heart fire blazing upward. Symptoms include sore throat with cracked or ulcerated tongue.

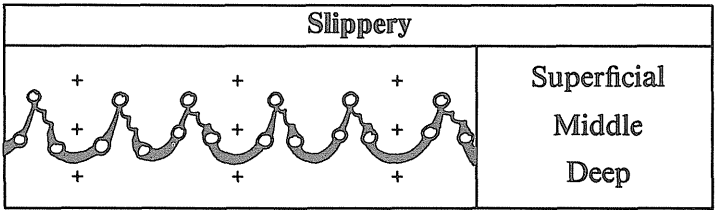
A rapid right cun position pulse indicates an upper heater disease with dry heat in the lung. Symptoms include coughing with vomiting of bloody pus — lung abscess.

A rapid pulse in the left guan position usually indicates liver fire blazing upward.

A rapid pulse in the right guan position indicates excessive internal heat caused by stomach fire.

Fire blazing upward from the lower heater creates a rapid pulse on both the left and right chi positions. Treatment is to nourish the yin and depress the fire.

11.5 Slippery Pulse



A pulse which feels round and smooth and flows evenly is called a slippery pulse.

It is like a greasy round ball, which slides under the fingers. It always remains even, like a smooth stream of water.

Pulse Comparisons

The slippery and rapid pulses usually occur together, but must not be confused.

A rapid pulse is one where the number of beats is obviously increased. In a slippery pulse the beats do not necessarily increase in number. However they *do* become smooth.

Clinical Significance

The slippery pulse usually results when there is an abundance of yang qi in the body.

However, it can also manifest when yuan qi fails and is unable to hold the liver and kidney fire, causing heat at the blood level.

It can also be caused by pathologies such as internal abundance of wind-phlegm blocking upward or food stagnation, counterflowing upward, causing vomiting, or remaining below, causing stasis.

The slippery pulse that appears in females who have failed to menstruate and who show no symptoms of a pathology usually indicates pregnancy.

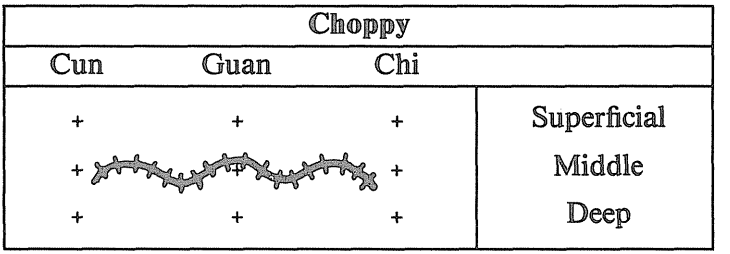
Cun, Guan, Chi

The cun position usually becomes slippery when tan yin collects between the chest and diaphragm, preventing heart yang and lung qi from descending and causing vomiting, acid reflux, stiff tongue, coughing, etc.

The guan position usually becomes slippery when liver heat blocks the spleen, causing indigestion.

The chi position usually becomes slippery when damp heat pours down to the kidney and bladder or small and large intestines, causing triple parching, dysentery, hernia or dysuria.

11.6 Choppy Pulse



A pulse which feels thin, minute and short and has an uneven flow, beating three and five times with irregular rhythm, is called choppy.

It feels like a knife scraping bamboo, rough and jagged. It is easily scattered like rain falling onto the sand. It also moves very slowly and at irregular depths, like an ill silkworm eating a leaf.

Pulse Comparisons

The choppy pulse must not be confused with the scattered, intermittent or minute pulses.

The choppy pulse has a "root" and although it seems to scatter, it does not. This is its primary differentiation from a scattered pulse.

The choppy pulse does not stop periodically, unlike the intermittent pulse.

The choppy pulse can be clearly felt at the floating and deep levels, unlike the minute pulse.

Clinical Significance

The choppy pulse usually results from a deficiency of ying blood with damaged jin ye. It therefore occurs in severe stomach obstruction or when severe sweating damages the jin and yang.

It also manifests when cold damp perverse qi penetrates to the ying level causing blockage and stagnation of blood circulation (blood bi).

A choppy pulse in pregnancy means that the woman has insufficient blood to nourish the fetus.

A choppy pulse in a non-pregnant woman means the jing and blood are drying up and it would be difficult for her to conceive.

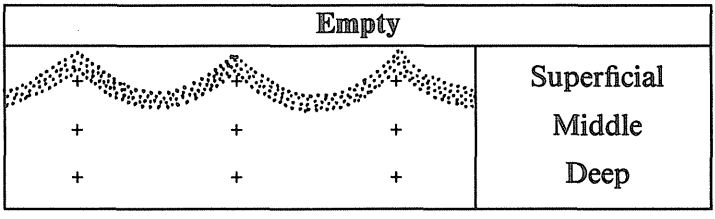
Cun, Guan, Chi

The cun position becomes choppy when damaged heart blood causes chest pain.

The guan position becomes choppy in weakness and deficiency of the spleen and stomach, where qi stagnation at both sides of the rib cage causes fullness and swelling.

The chi position becomes choppy when damage to the jing and blood in the lower heater results in knotting in the intestines, causing constipation and dribbling of urine, or intestinal wind, causing bleeding.

11.7 Empty Pulse



A pulse which feels floating and big with slow beats, but becomes obviously soft and deficient when slightly more pressure is applied, is an empty pulse.

Pulse Comparisons

The empty and hollow pulses are both floating and big, but they differ from each other and should not be confused.

Under stronger pressure the empty pulse feels soft and weak, while the hollow pulse feels floating and big. Like a spring onion, it feels empty and hollow at the center, but slightly fuller at the edge.

Clinical Significance

The empty pulse appears when the upright qi is damaged — after perspiration caused by unconsolidated Wei qi, after palpitations caused by heart blood deficiency, or after fear or fright caused by heart shen deficiency. First the upright qi is damaged, then symptoms appear.

During an external attack of summer heat, body heat increases because the Yuan qi has been damaged and the empty pulse appears. To treat, benefit the qi and the summer heat will clear.

Internal heat is caused by yin deficiency — the yin is unable to nourish the yang. To treat, nourish the yin and the heat will decrease.

Overall, blood deficiency or yang deficiency must be nourished and qi deficiency must be benefitted.

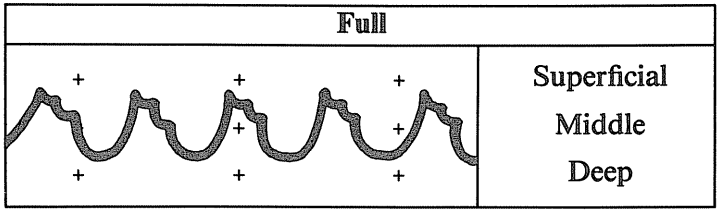
Cun, Guan, Chi

The heart is in the upper heater and when the heart blood is unable to provide nourishment, the pulse usually becomes empty at the cun position.

The spleen and stomach are in the middle heater. Food stagnation and stomach swelling caused by qi deficiency and loss of transforming function is indicated by an empty pulse at the guan position.

Both kidneys are in the lower heater. When numbness caused by steaming bone heat results from damaged jing and blood, the pulse becomes empty at both chi positions.

11.8 Full Pulse



When a pulse is felt both superficially and deeply, and has big, long, wiry, strong beats, it is called a full pulse.

The full pulse appears when excess perverse heat accumulates in the three heaters.

Superficial perverse heat is treated with acrid cooling herbs to induce perspiration and cool heat.

Internal perverse heat is treated with bitter, cold herbs to clear.

Pulse Comparisons

The full pulse is not to be confused with the tight and firm pulses.

The main characteristics of a tight pulse are that it is taut and rapid. It is like a tightly stretched rope which vibrates to the right and left.

The firm pulse is full, big, minute, wiry and long, but it can only be felt at the level of the tendons and bones. It differs from a full pulse because the full pulse can also be felt superficially.

Clinical Significance

The full pulse appears where there is severe accumulation of yang heat perverse qi.

Clinically, symptoms include insanity, divigation, vomiting, constipation and qi pain.

Simple accumulations of perverse yang usually create a full pulse.

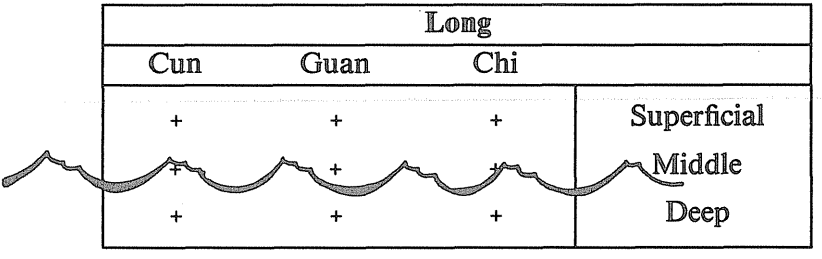
Cun, Guan, Chi

Excessive wind heat in the upper heater causing symptoms such as headache, fever, sore throat, stiffness at the root of the tongue or stuffiness in the chest and diaphragm will reflect in a full pulse at the cun position.

Stagnant heat in the spleen and stomach — excess perverse heat in the middle heater — causing symptoms of stuffiness and distention in the abdomen, will reflect in a full pulse at the guan position.

Severe accumulations of excessive heat in the lower heater which cause symptoms such as lumbago, abdominal pain and constipation will reflect in a full pulse at the chi position.

11.9 Long Pulse



A pulse which is neither big nor small, but feels long, soft and calm, like the end of a bamboo shoot, is a long pulse and in this state indicates health.

A pulse which comes like a tightly stretched string without softness or emptiness, firm and hard like a stick of bamboo, is a long pulse indicating disease.

Pulse Comparisons

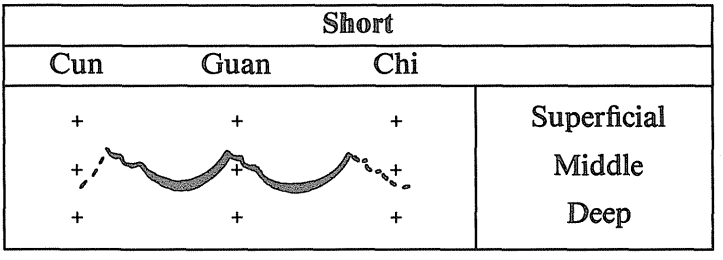
The long pulse always extends past the cun and chi positions but is not as tight and wiry as the wiry pulse.

Clinical Significance

The normal long pulse indicates the presence of strong upright qi.

In disease, the long pulse indicates toxic yang causing heat in the blood, wind phlegm causing epilepsy, or excessive internal heat in yang ming (mainly in the stomach and large intestine fu).

11.10 Short Pulse



A pulse which fails to fill both the cun and chi positions, fills the chi position but not the cun, or fills the cun position but not the chi, is a short pulse. The short pulse always feels dissatisfying — its beats are strong, but it rises and falls abruptly.

Pulse Comparisons

The short pulse is slightly different from the choppy pulse.

A short pulse which is thin and weak with slow, difficult beats is called a choppy pulse.

Clinical Significance

The short pulse occurs when the qi becomes deficient and unable to circulate smoothly.

The lungs rule the qi. If the lung qi is deficient and damaged and unable to lead the circulation of blood, the pulse can become short (weak) and deep.

Kidney yang deficiency which causes the qi to become obstructed and unable to nourish the "hundred mai" (which meet at the lungs), or phlegm stagnation or food accumulation which obstruct the trachea, will reflect in a pulse which is short and choppy.

Clinically, the short pulse most commonly occurs with symptoms of qi and blood deficiency.

Damage caused by alcohol poisoning or internal excesses of damp heat causes the pulse to become short, slippery and rapid.

Blood deficiency which is unable to nourish the pulse will cause it to become short and floating.

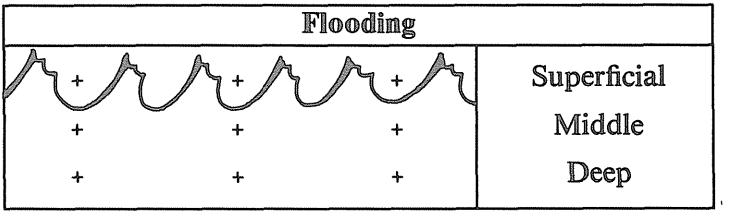
Fullness at the chest and abdomen will result in a pulse which is short (strong) and deep.

Cun, Guan, Chi

Deficiency of yang qi in the upper part of the body, causing headaches, gives a short pulse at the cun position.

Deficiency of yang qi in the lower heater or pain in the abdomen will give a short pulse at the chi position.

11.11 Flooding Pulse (or Big Pulse)



A flooding pulse is rough and big with beats that rise strongly but fade out as they fall.

It is like the ocean waves hitting the beach, it comes with force but recedes calmly.

The flooding pulse is normal during summertime, but if it occurs during spring, autumn or winter, it indicates diseases caused by fire.

Perverse cold qi which blocks the yang qi and fire heat accumulating internally is treated by using the "raising yang qi to scatter the fire" technique.

"Raising the yang qi to scatter the fire" is a technique used only when perverse yin qi has blocked the yang qi of the spleen and stomach preventing it from reaching the superficial level. This is not a commonly used technique for treating symptoms of fire (heat).

Pulse Comparisons

The flooding pulse is different from the full pulse because the full pulse does not have a very large base and whether felt under light or heavy pressure, it is wiry, long and strong.

Clinical Significance

The flooding pulse is caused by fire, usually resulting from excessive yang heat, but sometimes from yin deficiency, particularly when blood deficiency produces heart fire blazing upwards.

There are also different principles of treatment for the flooding pulse with excessive symptoms and for the flooding pulse with deficient symptoms.

The flooding pulse which occurs with abundant heat stasis in the stomach, causing swelling, fullness, upset stomach and vomiting, indicates excessive symptoms. Treat immediately by clearing the stomach heat.

The flooding pulse which occurs with dysentery or diarrhea indicates the yin jin has been severely damaged by yang heat, and is occurring with deficiency symptoms. Treat by nourishing the yin and clearing the heat.

Cun, Guan, Chi

When heart fire blazes upward, causing symptoms of dryness in the throat, sore throat and cracked or ulcerated tongue, the flooding pulse can be felt at the left cun position.

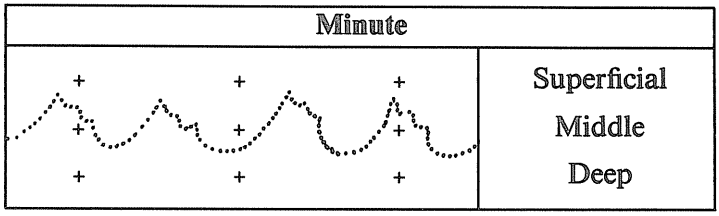
When excessive fire in the lung causes symptoms of coughing, asthma, pain in the chest and coughing of blood, the flooding pulse can be felt at the right cun position.

When excessive liver yang damages the jin in the stomach and spleen, both guan pulses become flooding.

When the kidney jing is deficient or damaged, the yin-fire is unable to be stored and both chi pulses become flooding.

Overall, if the flooding pulse appears in the upper, middle or lower heater, it is usually due to excessive fire and heat.

11.12 Minute Pulse



A pulse which is very thin and very soft is called a minute pulse.

It is like a fine thread. It breaks when pressure is applied, and becomes intermittently indistinct, fading in and out.

Even though it is only vaguely felt by the tips of the fingers, its rhythm remains constant.

Pulse Comparisons

The minute pulse must not be confused with the thin pulse.

The minute pulse is intermittently indistinct, whereas the thin pulse is a little bigger and clearly felt.

The minute pulse is caused by failure of yang qi, whereas the thin pulse is caused by deficiency of ying blood.

Clinical Significance

Whenever there is a deficiency of blood and qi, especially when there is a deficiency of yang qi, the pulse will be minute.

When yang qi is weak and deficient, or the body surface is not consolidated, there are usually deficient symptoms like fear of cold, fever and excessive perspiration.

In the five types of fatigue and the six types of extreme fatigue in men and in uterine bleeding and vaginal discharge in women, the pulse is usually minute. This is due to qi and blood both being deficient.

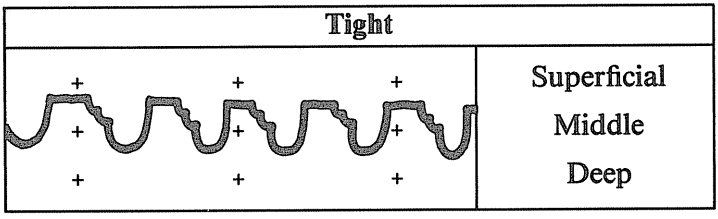
Cun, Guan, Chi

Dyspnea caused by lung qi deficiency and fright caused by heart qi deficiency will reflect in a minute pulse felt at both cun positions.

When the transporting and transforming functions of the spleen and stomach are damaged by deficiency and there are symptoms of stuffiness and distention, the minute pulse can be felt at both guan positions.

When the kidney yuan yang is damaged with cold body and painful abdomen, or when jing blood is deficient and damaged with triple parching, the minute pulse can be felt at both chi positions.

11.13 Tight Pulse



A pulse which rises and falls with strength and vibrates to the left and right is called a tight pulse.

It is like a tightly stretched rope and feels twisted, whether light or heavy pressure is applied.

A tight pulse which is rapid and strong is usually caused by perverse cold qi, but can also be caused when perverse cold qi blocks yang heat.

Cold is contractive by nature and characteristically produces tightness. Whenever diseases are caused by attacks of perverse cold, when abdominal pain is caused by qi-blood stagnation or when body pain is caused by a tightening of the channels, there may be a tight pulse.

Pulse Comparisons

The tight pulse is not to be confused with the wiry and full pulses.

The full pulse has big, long, wiry, strong beats and is felt both superficially and deeply.

The wiry pulse feels taut, long and strong, passing straight under the fingers without vibrating to the left and right or giving any wavelike sensations.

Clinical Significance

Excessive cold perverse qi, which causes any type of pain, gives a tight pulse.

Perverse cold qi which attacks the lungs, causing coughing and asthma, gives a tight pulse.

Perverse cold qi attacking the liver and accumulating, causing wind epilepsy, gives a tight pulse.

Perverse cold qi which attacks the spleen, causing vomiting of cold phlegm, gives a tight pulse.

In a disease of external perverse cold qi with a floating tight pulse, treat with pungent, warming herbs to scatter the perverse cold.

In a disease of internal perverse cold with a deep and tight pulse, use pungent hot herbs to warm and scatter the internal cold.

This explains the therapeutic principles for the treatment of perverse cold qi.

Cun, Guan, Chi

The right and left cun positions are different. The left is called ren ying and the right is called qi Kou.

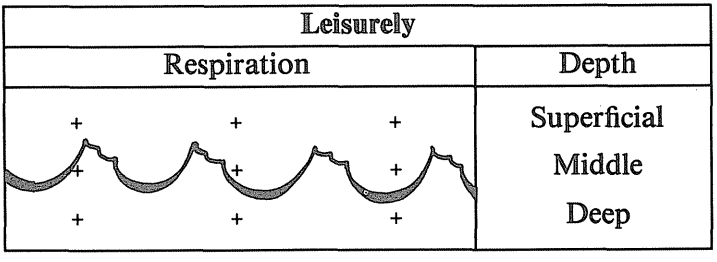
External perverse cold attacks produce a tight pulse at the left cun position.

Internal perverse cold injuries produce a tight pulse at the right cun position.

In a disease where cold dampness accumulates and blocks the middle heater — the stomach and spleen — causing abdominal pain, both guan positions can be tight.

In a disease where excessive perverse cold in the lower heater causes yin-cold symptoms — sensations of qi rising from the lower abdomen or hernia pain — both chi positions can be tight.

11.14 Leisurely Pulse



A pulse which is slightly faster than a slow pulse, with exactly four beats per respiration, is called leisurely.

It is like a thread on a loom which has not been tightened, it ambles beneath the fingers and is normal in every respect. It is elegant and relaxed like a weeping willow branch, swaying in a gentle spring breeze.

The leisurely pulse indicates an abundance of shen qi. No matter what other qualities a pulse may have, if it is leisurely and relaxed it indicates shen qi.

The pulse containing shen qi usually indicates that the stomach qi is still functioning and that the kidney qi is abundant.

Pulse Comparisons

See slow pulse (p. 65).

Clinical Significance

The leisurely pulse is normally an indication of health. Therefore, whenever it is found in disease, it is always combined with other qualities.

An external perverse wind attack with a deficiency of ying and excessive wei shows as a leisurely pulse which is also floating.

In a disease where dampness blocks the jing luo, the leisurely pulse is also deep. If the spleen and stomach are weak and deficient, the leisurely pulse will also be slow and thin.

In the diseases of wind damp above, with stiffness of the neck, the leisurely pulse is floating and strong.

In wind damp below, with wei or bi syndrome, the leisurely pulse is sinking and strong.

Generally, to understand the different types of leisurely pulse it is necessary to determine whether it combines with a floating, sinking, big or thin pulse.

Cun, Guan, Chi

External perverse wind which causes stiffness of the neck and upper back produces a leisurely floating pulse, felt at the cun position.

Movement of wind, causing headache and dizziness, produces a leisurely strong pulse, felt at the left guan position.

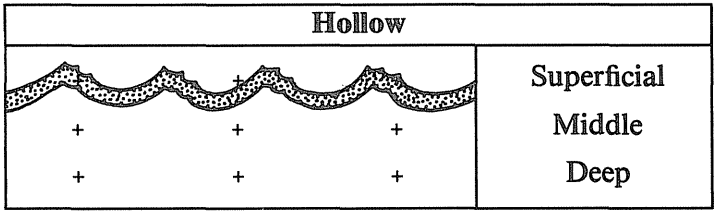
Deficiency and weakness of stomach qi produces a leisurely pulse lacking strength and felt at the right guan position.

Deficiency of the spleen and kidney yang, causing diarrhea, produces a leisurely slow pulse, felt at the chi position.

Drying of the jin ye, which generates wind, causing constipation, produces a leisurely, choppy pulse felt at the chi position.

qi deficiency and damp stagnation causing weakness and sluggish movement in both legs will produce a leisurely, slow, weak pulse felt at the chi position.

11.15 Hollow Pulse



A pulse which feels floating, big and soft under slight pressure but without substance at the center under heavier pressure is called a hollow pulse.

It is like a spring onion, which feels strong at the edge but without strength inside.

Superficially it feels full, but at a deeper level, it feels empty.

Pulse Comparisons

The hollow pulse must not be confused with the empty and leather pulses.

The hollow and empty pulses are both floating and big, but the hollow pulse is floating, big and soft, while the empty pulse is floating, big and slow.

The hollow pulse and leather pulse both feel strong superficially and lack strength deeply, but the hollow pulse feels strong and soft superficially, while the leather pulse feels strong and wiry superficially.

The hollow pulse always appears after a severe loss of blood, while the leather pulse appears after loss of blood and jing with deficient cold diseases.

Clinical Significance

External excess with internal deficiency is usually caused by heavy pathological bleeding.

Perverse fire which penetrates the three yang causes heavy spitting of blood, vomiting of blood or nose bleeds.

Perverse fire which penetrates the three yin causes blood in the stools or uterine bleeding.

The hollow pulse usually appears after bleeding.

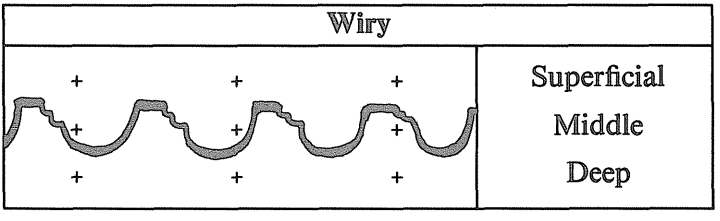
Cun, Guan, Chi

Blood loss, which prevents blood from nourishing the heart, causing irritability and palpitations, produces a hollow pulse felt at the cun position.

Severe vomiting of stomach blood produces a hollow pulse, felt at the guan position.

In diseases where there is blood in the urine, red dysentery, blood in the stools or uterine bleeding, the hollow pulse can be felt at the chi position.

11.16 Wiry Pulse



A pulse which feels taut, long and strong, whether under pressure or not, and passes straight under the fingers without vibrating to the left

and right or giving any wavelike sensations, is called a wiry pulse.

It feels like a bow string about to shoot an arrow and is firmly fixed. It is resilient and forceful, like the string of a musical instrument.

The wiry pulse is usually caused by an excess of liver qi.

Excessive liver qi which continues to counterflow damages the digestive function of the stomach and spleen.

Liver qi which accumulates and stagnates can easily cause fullness and swelling in the chest and rib regions with emotional instability. Such patients will scream unpredictably to relieve their chest discomfort.

Stuck liver qi causes wind heat with symptoms of bloodshot eyes and epiphora (tearing).

Pulse Comparisons

The wiry pulse should not be confused with the tight and firm pulses.

The wiry and tight pulses are both taut and tight but the tight pulse is tight like a twisted rope while the wiry pulse is tight and straight.

The wiry pulse and the firm pulse are both wiry and long, but the firm pulse only appears at the deep and hidden levels, while the wiry pulse can be felt superficially.

Clinical Significance

In any disease of the liver and gall bladder, whether caused by yin or yang perverse qi, the pulse is always wiry. However, if caused by yang perverse qi, the pulse is usually wiry, big and slippery, while if caused by yin perverse qi, the pulse is usually wiry, tight and thin.

Diseases with thick or thin phlegm or with pain — such as alternating hot and cold and malaria (when there is more cold than heat) — also usually occur with a wiry pulse. In such cases it must be carefully determined whether pulses are also floating, sinking, slow or rapid.

Symptoms of coughing, dyspnea, shallow respiration and edema usually show up with a pulse which is floating and wiry.

When there are symptoms of coughing, pain in the chest and ribs and water accumulation under the ribs, the pulse is usually sinking and wiry.

When there is excessive heat the pulse is rapid and wiry.

When there is excessive cold the pulse is slow and wiry.

When there are symptoms of deficiency the pulse is usually big and wiry.

When there are spasms, stiffness and pain in the pulse, the pulse is thin and wiry.

When there are symptoms of spitting clear, watery phlegm, lumps in the ribs and abdomen, belching, pain in the ribs and reduced ability to receive food, the wiry pulse can be felt only on one hand.

When there are symptoms of abdominal pain, diarrhea, cold qi rushing upward, cold limbs and hernia pain, the wiry pulse can be felt on both hands.

When there are mild diseases the pulse is wiry and soft.

When there are severe diseases the pulse is wiry and hard.

Cun, Guan, Chi

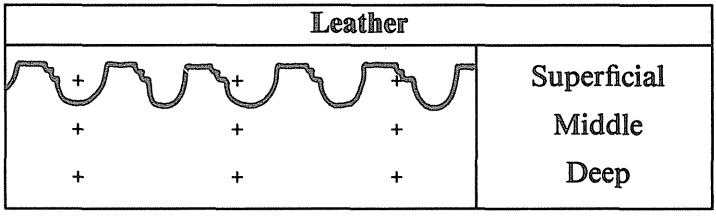
Accumulated phlegm in the chest and diaphragm, which causes headaches, indicates the disease is in the upper heater and the cun pulse becomes wiry.

Diseases of the liver and gall bladder channels cause accumulations with alternating hot and cold and the left guan pulse becomes wiry.

Excessive perverse cold qi in the stomach and spleen causes pain in the abdomen and the right guan pulse becomes wiry.

Deficiency and cold of the liver and kidney causing yin hernia (pain in the testicles pulling to the lower abdomen) and cramping of both legs results in both chi pulses becoming wiry.

11.17 Leather Pulse



When a pulse feels wiry, almost rapid and without substance in its center, it is leathery.

It is like hitting a drum skin, it feels firm and impatient under light pressure but hollow under heavier pressure.

It is a combination of the hollow and wiry pulses.

Pulse Comparisons

See hollow pulse and firm pulse (pp. 83, 87).

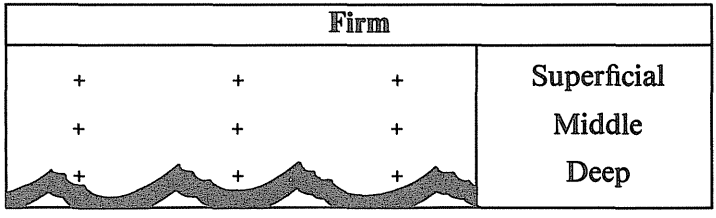
Clinical Significance

In any disease with internal deficiency of jing blood and cold perverse qi, the leathery pulse can be felt.

In females it can occur when miscarriage causes continuous uterine bleeding.

In males it can occur after emissions cause deficiency and damage of ying qi.

11.18 Firm Pulse



A pulse which is very deep, almost hidden, and not only strong and long but also wiry and impatient is called a firm pulse.

Pulse Comparison

The firm pulse is opposite to the leather pulse.

The leather pulse feels floating, wiry and hollow, whereas the firm pulse feels very deep, strong, long and slightly wiry.

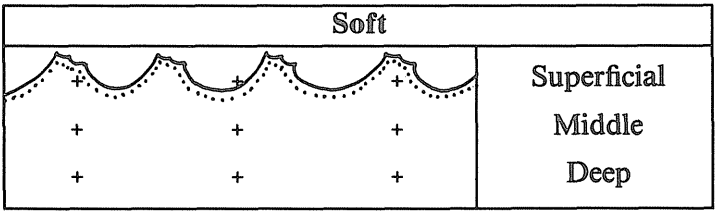
The leather pulse appears with symptoms of extreme deficiency, whereas the firm pulse appears with symptoms of extreme excess.

Clinical Significance

When excessive perverse qi causes excessive internal cold with symptoms like cold pain in the heart region and abdomen, accumulation of stagnant liver qi or decreased transforming ability of the spleen, the firm pulse can appear.

Generally speaking, when accumulation diseases like hernia and lumps in the abdomen have full pulses they go "with the current" and there is no need for alarm. However, if a firm pulse occurs in a disease with severe deficiency, like loss of blood or yin deficiency, there are deficiency symptoms with full pulses. They go "against the current," indicating severe damage of upright qi with excessive perverse qi.

11.19 Soft Pulse



A pulse which feels floating, very thin and without strength is called a soft pulse.

It is like a strand of cotton floating on the water and feels very thin and indistinct. It is like a bubble, which bursts when pressure is lightly increased.

This pulse appearing after a severe disease or after childbirth indicates that the body has not recovered from damage to the blood and qi. The pulses and symptoms are both deficient, so they go "with the current." The deficiency can be reinforced and the treatment is easy.

The soft pulse in a normal person without any symptoms of severe disease is said to be without root, due to failure of the kidney and spleen. This must be quickly treated to curtail further development.

Pulse Comparisons

The soft pulse must not be confused with the weak, minute or thin pulses.

The soft pulse, like the weak pulse, is thin and without strength, but the soft pulse can only be felt at the superficial position, whereas the weak pulse can be felt at the deep position.

The soft pulse, like the minute pulse, is floating and thin. However, when pressure is increased, the soft pulse cannot be felt, whereas the minute pulse does not vanish, but becomes intermittently indistinct.

The soft pulse, like the thin pulse, is very fine, but the soft pulse can only be felt at the superficial position, whereas the thin pulse can be clearly felt at a sinking position.

Clinical Significance

The soft pulse usually indicates damage to the ying-blood and severe deficiency of yin jing. It can appear with deficiency in the sea of marrow, deficiency of the *dan tian*, yin deficiency causing night sweats, bone steaming fever or uterine bleeding.

It can also indicate spleen deficiency with inability to control dampness and can therefore appear when dampness trapped in the spleen causes soft stools.

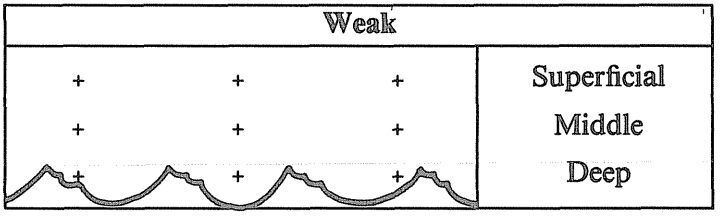
Cun, Guan, Chi

When the yang qi is weak and the surface cannot be consolidated, nonstop sweating appears and the soft pulse can be felt at the cun position.

When the stomach and spleen are weak and deficient and the central qi is deficient, the soft pulse can be felt at the guan position.

When the lower heater is cold and deficient, and the jing and blood have both been damaged, the soft pulse can be felt at both chi positions. In this case, treat by warming to tonify the true yin which will discharge the disease.

11.20 Weak Pulse



A pulse which is felt to be very soft and thin under deep pressure, but cannot be felt at the superficial level, is called a weak pulse.

This pulse usually results when weakness and deficiency of jing and blood have led to underactivity and sinking of yang qi. (The qi is unable to raise the pulse.)

When felt in geriatric patients, it is the natural consequence of aging, but when felt in younger patients, its cause must be determined with care.

Pulse Comparisons

The weak pulse must not be confused with the soft pulse.

Like the weak pulse, the soft pulse is thin and without strength, but the soft pulse can only be felt at the superficial position, whereas the weak pulse can only be felt at the deep position.

Clinical Significance

The weak pulse is usually caused by damage and deficiency of yin jing with failure of yang qi.

The ying and wei qi deficiencies result in the surface not being consolidated and frequent attacks by external perverse qi occur, causing symptoms such as fear of cold and fever.

Therefore, when external symptoms occur with a sinking, weak pulse, weakness and failure of yang qi is indicated.

If the yang qi and yin jing are unable to recover, numerous different diseases will eventually develop.

If the jing qi is too deficient to nourish the bone marrow, there can be atrophy of the legs with difficulty in walking and standing.

If the jing qi is too deficient to nourish the tendons or connective tissues, the tendons atrophy, causing spasticity.

If the ying blood is too deficient to nourish the heart and calm the shen, there will be fright.

If the wei qi is too deficient to nourish the skin and consolidate the surface, there will be spontaneous perspiration.

If the spleen and stomach are deficient and damaged and the central qi sags downward, there will be listlessness.

The only appropriate principle for treating any type of disease that occurs with a weak pulse is to reinforce and benefit the yang qi and regulate the ying blood.

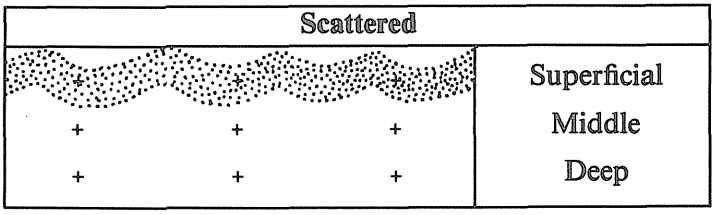
Cun, Guan, Chi

In deficiency and weakness of heart and lung yang qi, the weak pulse can be felt at the cun position.

In deficiency and weakness of the spleen and stomach, the weak pulse can be felt at the guan position.

In prolapse of yang qi in the lower heater or absolute failure of yin jing, the weak pulse can be felt at the chi position.

11.21 Scattered Pulse



A pulse which feels indistinct, big and without strength when slight pressure is applied, but vanishes when pressure is increased, is called a scattered pulse.

It is like dandelion seeds in the wind, it feels diffuse. Sometimes its beats rise with strength and fall without strength, and sometimes vice versa. They are therefore indistinct.

Pulse Comparisons

The scattered pulse must not be confused with the soft, empty or hollow pulses.

The scattered pulse is indistinct, floating, without strength and big.

The soft pulse is floating, thin and soft.

The empty pulse is floating and big, but loses strength when slightly more pressure is applied.

The hollow pulse is floating and without substance in the center.

These four pulses are all without strength and floating, but each one has a slightly different quality.

Clinical Significance

The main cause of this pulse is deficiency and damage of yuan qi.

When the scattered pulse appears during pregnancy, it indicates that child delivery is imminent. If it is too early for delivery, miscarriage can result.

If the scattered pulse is felt in a chronic disease, it means that the spleen and kidney yang have been severely damaged.

Cun, Guan, Chi

When heart yang deficiency causes palpitations, the scattered pulse can be felt at the left cun position.

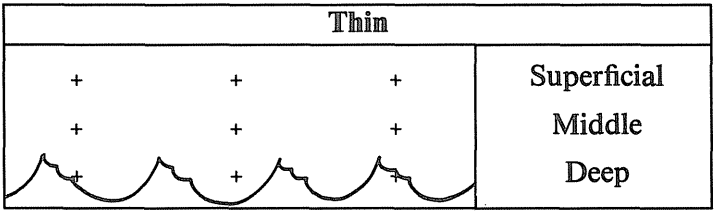
When wei qi, not being consolidated, causes spontaneous perspiration, the scattered pulse can be felt at the right cun position.

When yang is unable to transform yin and fluid diseases result, the scattered pulse can be felt at the left guan position.

When spleen yang is deficient and water-damp pours downward, causing swelling and edema of the legs or the dorsal surface of the foot, the scattered pulse can be felt at the right guan position.

When chronic diseases are caused by scattered yuan qi, both chi pulses are scattered.

11.22 Thin Pulse (or Small Pulse)



A pulse which always feels like a fine thread, even though it is soft, weak and without strength, is called a thin pulse.

Pulse Comparisons

The thin pulse must not be confused with the minute pulse.

Even though the thin pulse is wiry and fine, it can be clearly felt, whereas the minute pulse is indistinct.

Clinical Significance

Yang qi becomes abundant during spring and summer, so the circulation of blood must be kept correspondingly strong. During these seasons, if a thin, weak pulse appears in a young person, a careful examination should be conducted.

Yang qi diminishes during autumn and winter, so the circulation of blood must correspondingly slow down. If during these seasons, a thin weak pulse appears in an elderly person whose qi and blood have been slightly weakened by the aging process, it does not indicate disease, but reflects a normal reaction to weather.

Pulses which are as thin as a thread are usually caused by deficiency and failure of qi and blood.

They can, however, also appear in the following disorders: Disharmony and damage of the seven emotions, causing deficiency and fatigue; weakness and deficiency of yang qi and penetration of water damp, causing diseases of the loins and kidneys; and internal injury of jing qi, which prevents yang from consolidating the surface, causing spontaneous perspiration.

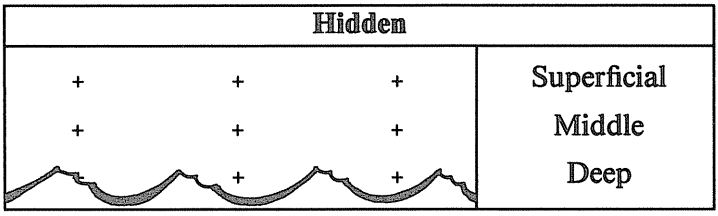
Cun, Guan, Chi

When frequent vomiting causes severe deficiency of qi, the thin pulse can be felt at the cun position.

When weakness and deficiency of the spleen and stomach cause abdominal swelling and emaciation, the thin pulse can be felt at the guan position.

When severe failure of yuan yang causes cold dan tian, diarrhea and emissions, or collapsed yin jing causes excessive bleeding, the thin pulse can be felt at the chi position.

11.23 Hidden Pulse



A pulse which cannot be felt until deep pressure is applied to the level of the bone, and even then the beats seem to come from beneath the tendons, is called a hidden pulse.

Whether the beats are distinct or indistinct, they can only be felt at a very deep level.

Pulse Comparisons

The hidden pulse is deeper than the sinking pulse.

Clinical Significance

The hidden pulse is usually caused by perverse cold obstructing the jing luo or zang fu.

It can be caused by external cold blocking the channels and preventing the yang qi from surfacing, in which case it disappears as soon as the yang qi clears the cold and produces perspiration.

It can also be caused by yin-cold accumulating internally. In this case, there are cold sensations around the navel or in the abdomen with ice cold limbs.

Less frequently, it is caused by perverse cold generating heat — when internal stasis of perverse qi blocks the jing mai, obstructing the blood and qi.

Hence the hidden pulse can appear in conditions such as cholera, frequent vomiting caused by food accumulation or in intermittent abdominal pain caused by phlegm stasis.

Traditionally, any disease in which vomiting and diarrhea occurred together was called "cholera." This definition does not necessarily

correspond to the modern usage of the term. Such diseases are usually caused by food accumulation. Yang-heat is obstructed externally and yin-cold is hidden internally.

In these cases, use the "internal warming, cold scattering" technique to increase the flow of blood and qi, thereby clearing the accumulation or counteracting the stasis and dissolving the phlegm.

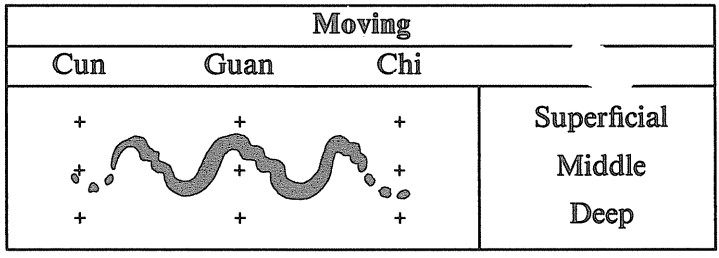
Cun, Guan, Chi

When food stagnation causes discomfort in the chest, or qi stagnation causes nausea with inability to vomit, the hidden pulse can be felt at both cun positions.

When cold damp accumulates at the middle heater, causing laziness and abdominal pain, the hidden pulse can be felt in both guan positions.

When accumulated cold qi blocks the lower heater, causing extremely painful hernia, the hidden pulse can be felt in both chi positions.

11.24 Moving Pulse



A pulse which feels rapid, tight, slippery and short with strong beats is called a moving pulse.

It is like a bean and feels strong under the fingertips, with well-defined peaks, but without head or tail.

Traditionally, the moving pulse is said to appear only at the guan position. However, it can actually be felt in any of the three positions.

The moving pulse is usually caused by yin and yang qi fighting with each other. When yin and yang qi fight with each other, the winner has calm mai qi, but the loser is firm, hard and strong.

Pulse Comparisons

A moving pulse is a rapid pulse which can only be felt in the guan position.

Clinical Significance

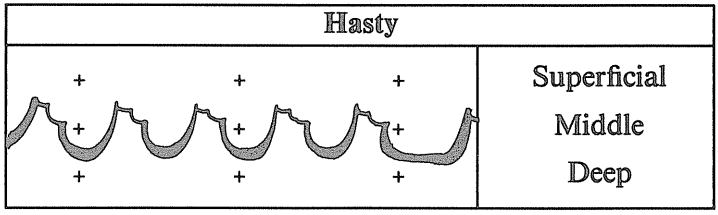
The moving pulse can be felt when pain is caused by excessive cold winning over yang; when fright or palpitations are caused by qi confusion; when spontaneous perspiration is caused by yang not winning over yin; when fever is caused by yin not winning over yang; when diarrhea is caused by disharmony between the spleen and stomach; when dysentery is caused by qi and blood disturbing each other (the transportation and transformation functions of the zang fu are impeded); when jing mai contractions are caused by yin-cold perverse qi injuring the channel qi; when failure of jing (in men) or uterine bleeding (in women) is caused by yin deficiencies and yang excesses.

In general, the moving pulse only appears with these symptoms when the yin and yang have been fighting each other.

When the yang wins, the yin is deficient, so the yin qi attacks. The pulse becomes firm and tight and the moving pulse appears.

When yin wins, yang becomes empty, so the yang qi attacks. The pulse becomes tight and firm and the moving pulse appears.

11.25 Hasty Pulse



A pulse which feels rapid but loses a beat at irregular intervals is called a hasty pulse.

It is like a person who stumbles while walking briskly — the flow is interrupted.

It results from fire stasis, qi accumulating in the three heater. Therefore the yin fluid (blood) can be easily damaged. The circulation of qi and blood is obstructed.

Here, if the intervals between the loss of a beat gradually increase (indicating increasing obstructions) prognosis is poor. If they gradually decrease (indicating decreasing obstructions) prognosis is good.

Pulse Comparisons

The hasty, knotted and intermittent pulses must not be confused.

A hasty pulse is a rapid pulse which misses beats at irregular intervals. A knotted pulse is a leisurely pulse which misses beats at irregular intervals. An intermittent pulse stops at regular intervals for a little longer than one beat.

Clinical Significance

The hasty pulse results from fire stasis in the three heater, but frequently occurs with accumulations other than those of qi and blood.

According to traditional texts, there are five types of internal accumulations — qi, blood, thick phlegm, thin phlegm and food.

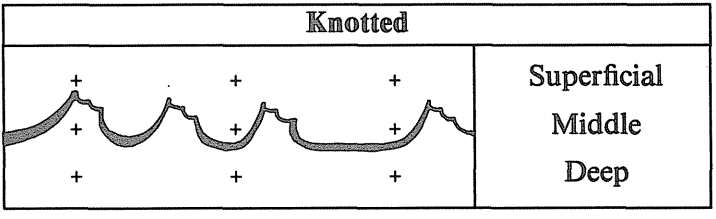
The type of accumulation and the location of fire must be determined before treatment.

Symptoms of loss of consciousness and delirium with a hasty pulse indicate that perverse fire has penetrated the zang.

Symptoms of red rashes with a hasty pulse indicate that toxic heat has penetrated the ying level and caused accumulation of ying qi.

Symptoms of ulcers and abscesses with a hasty pulse indicate that heat has penetrated the muscles and caused accumulation of blood and qi and disintegration.

11.26 Knotted Pulse



A pulse which feels leisurely, but loses a beat at irregular intervals, is called a knotted pulse.

It usually results from excessive cold, yin perverse qi accumulating internally and blocking the flow of qi and blood, with deficiency of yang heat. However, it is sometimes also caused by deficiency and failure of upright qi — gradual failure of blood and qi, or chronic diseases with failure of jing qi.

A knotted pulse which is floating and strong indicates stagnation of perverse cold in the jing mai.

In this case the "acrid warming" technique should be used to induce sweating and scatter the cold.

A knotted pulse which is sinking and strong indicates accumulated yin-cold obstructing the qi.

In this case, the "acrid stagnation dispersing" technique should be used to disperse accumulation and stasis, after which the knotted pulse will disappear.

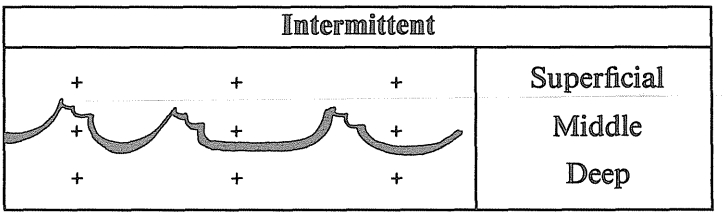
Pulse Comparisons

The knotted and hasty pulses both miss beats at irregular intervals. However, the knotted pulse is leisurely while the hasty pulse is rapid. The knotted pulse usually indicates cold while the hasty pulse usually indicates heat.

Clinical Significance

The knotted pulse is always caused by stagnation and accumulation of qi and blood. For instance, when phlegm knots and stagnates, it can cause conditions such as abscesses or hernias, thus blocking the flow of blood and qi. When the qi has been obstructed, the knotted pulse appears.

11.27 Intermittent Pulse



A pulse which loses a beat and then pauses a little longer before starting again, at regular intervals, is called an intermittent pulse.

To arrive at the cun position, the blood must flow through the sea point (LU-5, chi ze) and through the guan position. This means that it must flow from the interior to the exterior.

During the pause between beats, the blood seems to retract, ebbing up to the sea point, but when it returns there can be a double beat. This is described as the lost beat being recovered. If there is not a double beat when the pulse returns, the lost beat has not been recovered.

If one pulse beat is missed at regular intervals and is then recovered, the pulse is intermittent.

The intermittent pulse can be caused by damaged or deficient qi and blood or deficiency of yuan yang. If the intermittent pulse appears in a chronic disease, it is necessary to distinguish where the deficiency is to give correct treatment.

If the intermittent pulse is suddenly felt in a normal person, careful diagnosis is necessary to avoid incorrect treatment.

Pulse Comparisons

The hasty, knotted and intermittent pulses all miss beats so they must not be confused.

A rapid pulse which misses beats is hasty, whereas a leisurely pulse which misses a beat is knotted. The only difference between these two pulses is that one is rapid and one is leisurely. They both stop at irregular intervals.

However, the intermittent pulse, which cannot recover its lost beat, stops at regular intervals and it pauses for a little longer than one beat.

Usually, with a hasty or knotted pulse, the disease is milder, while with an intermittent pulse, the disease is more severe.

Clinical Significance

The intermittent pulse is usually felt when there is failure and weakness of the zang qi with deficiency of yuan yang.

It can appear when deficiency and damage of the lower yuan qi causes abdominal pain, when weakness and deficiency of the stomach and spleen causes diarrhea, or when weakness of the central yuan qi causes vomiting and diarrhea.

If the intermittent pulse is felt occasionally after three months of pregnancy, it indicates deficiency of yuan qi.

Appendix
Pulse Descriptions

Flooding	
Quality	**Explanation**
Depth:	Floating
Strength:	Rises with strength but falls without strength.
Width:	Big
Meaning:	Abundant heat (sometimes with yin deficiency)
Explanation:	Abundant internal heat causes the arteries to expand. Therefore, excessive heat causes a strong superficial pulse (this refers to the big pulse). To distinguish whether the disease is excess or deficient, determine whether or not the pulse is strong. Heat often damages yin. When the yin qi is deficient internally the Yang qi floats outward and the pulse becomes flooding. If the flooding pulse appears after a chronic disease (like deficiency fatigue) or in weak patients (after loss of blood, diarrhea, etc.), yin deficiency is producing fire.

Floating Strong	
Quality	**Explanation**
Depth:	Floating
Strength:	Strong
Meaning:	Superficial excess
Explanation:	When perverse qi attacks the muscles, the wei qi resists and because the mai qi combines with the wei qi, the beats are felt at the outside.

Floating Weak	
Quality	**Explanation**
Depth:	Floating
Strength:	Weak
Meaning:	Superficial deficiency (caused by blood deficiency)
Explanation:	When blood is deficient and unable to support the qi, the qi "jumps" to the exterior. Hence the pulse becomes floating but is without strength.

Empty	
Quality	**Explanation**
Depth:	Floating
Rapidity:	Leisurely or slow
Strength:	Weak
Width:	Big
Meaning:	Deficiency (of both qi and blood)
Explanation:	There is insufficient qi to properly lead the blood. The pulse becomes leisurely and the arteries become flaccid (big). There is insufficient blood to support the qi. Hence the pulse feels weak and what qi is left jumps to the exterior. Thus, the empty pulse is also floating.

Scattered	
Quality	**Explanation**
Depth:	Floating
Strength:	Very weak
Width:	Very big
Meaning:	Yuan qi scattered (both qi and blood are exhausted and the zang fu qi is about to scatter)
Explanation:	The stomach qi, postnatal essence, is exhausted. Therefore the pulse has no root and cannot be felt at the middle level. This pulse usually occurs at the critical stage of a disease.

Hollow	
Quality	**Explanation**
Depth:	Floating
Strength:	Without substance in center
Width:	Big
Meaning:	Severe loss of blood (causing yin damage); superficial excess with internal deficiency
Explanation:	When the yin blood is deficient internally, the pulse is without substance in the center. The yang qi has nowhere to which it can adhere and it scatters outwardly. Thus the pulse is also big and the artery feels relatively hard.

Leathery	
Quality	**Explanation**
Depth:	Floating
Rapidity:	Impatient
Strength:	Weak, without substance in center
Width:	Big
Quality:	Wiry
Meaning:	Damaged jing blood with cold
Explanation:	When qi is deficient and not consolidated, the jing blood cannot be stored. Therefore, the qi has nothing to which it can adhere, and it jumps to the outside.

Soft	
Quality	**Explanation**
Depth:	Floating
Strength:	Weak
Width:	Thin
Meaning:	Various types of severe deficiency or trapped dampness
Explanation:	The soft pulse can be caused by insuffiency of qi and blood and therefore usually indicates various types of deficiency. However, it can also occur when damp qi restricts the blood vessels. In this case it must not be mistaken as a deficient condition.

Minute	
Quality	**Explanation**
Depth:	Floating (but only according to Li Shi Zhen)
Strength:	Disappears intermittently under slight pressure
Width:	Very thin
Meaning:	Deficiency and failing of qi and blood (if in a chronic disease, the upright qi is about to be exhausted)
Explanation:	When the yang qi is failing, the pulse seems to disappear under light pressure. When the yin qi is failing, the pulse seems to disappear under heavy pressure.

Sinking Strong	
Quality	**Explanation**
Depth:	Sinking
Strength:	Strong
Meaning:	Internal excess (usually phlegm or cold)
Explanation:	When perverse qi resides internally, it causes stagnation of qi and blood. Hence the pulse feels deep and strong.

Sinking Weak	
Quality	**Explanation**
Depth:	Sinking
Strength:	Weak
Meaning:	Internal deficiency
Explanation:	When the yang qi becomes deficient, it sinks and stagnates; it is unable to raise the pulse. Hence the pulse feels deep but is without strength.

Hidden	
Quality	**Explanation**
Depth:	Deeper than the sinking pulse
Meaning:	Perverse qi trapped internally (usually perverse cold generating heat)
Explanation:	When perverse qi blocks the true qi from spreading and the qi mechanism from operating (by causing stagnation of qi and blood), the pulse becomes hidden.

Firm	
Quality	**Explanation**
Depth:	Deeper than the sinking pulse
Length:	Long
Strength:	Strong
Width:	Big
Quality:	Wiry
Meaning:	Chronic yin cold accumulation (can be at qi or blood level)
Explanation:	This is a type of hidden pulse, with very strong perverse qi. Hence it also feels big and strong.

Full	
Quality	**Explanation**
Depth:	Normally fills all three levels but can be sinking
Length:	Long
Strength:	Very strong
Width:	Big
Quality:	Wiry
Meaning:	Excessive conditions (when deep excessive internal heat)
Explanation:	The pulse becomes full at all three levels when perverse qi and upright qi are fighting each other. When internal heat blocks the spread of qi (a clinically uncommon situation) the full pulse can only be felt at the sinking level.

Weak	
Quality	**Explanation**
Depth:	Sinking
Strength:	Weak
Width:	Thin
Meaning:	Insufficient qi and blood (deficient or damaged yin jing with failure of ying qi)
Explanation:	Extreme deficiency of qi, with insufficient strength to raise the pulse

Thin	
Quality	**Explanation**
Depth:	Sinking
Strength:	Weak
Width:	Very thin
Quality:	Wiry
Meaning:	qi and blood both deficient (especially blood) or stagnation of perverse damp in the channels
Explanation:	The pulse becomes thin when there is insufficient qi and blood to fill it, or when the arteries are blocked and constricted by perverse damp.

Slow Strong	
Quality	**Explanation**
Rapidity:	Slow
Strength:	Strong
Meaning:	Accumulated cold or knotted heat
Explanation:	When cold coagulates and qi stagnates, the transporting ability of yang qi diminishes and the pulse becomes slow. Occasionally, a slow pulse occurs when perverse qi accumulates and heat knots, blocking the circulation.

Slow Weak	
Quality	**Explanation**
Rapidity:	Slow
Strength:	Weak
Meaning:	Deficiency cold
Explanation:	See above

Leisurely	
Quality	**Explanation**
Rapidity:	Leisurely
Meaning:	Damp diseases or good health
Explanation:	The spleen belongs to earth and controls dampness. When dampness is trapped inside the spleen and the qi mechanism is blocked, the pulse becomes leisurely. If the mai qi feels easy going and and in harmony, the pulse is leisurely with shen. This is a normal pulse.

Choppy	
Quality	**Explanation**
Rapidity:	Slow
Length:	Short
Strength:	Weak
Constancy:	Comes and goes with difficulty, sometimes 3 beats then 5
Meaning:	Blood deficiency with damaged jin ye or inadequate blood flow, due to obstruction
Explanation:	When the blood is deficient and the jin fluid is scarce — unable to moisturize the jing luo — the mai qi comes and goes with difficulty. When phlegm and food knot or the channels are blocked by extravasated blood or stuck blood lumps, the flow of blood is hindered and the pulse also becomes choppy.

Knotted	
Quality	**Explanation**
Rapidity:	Leisurely
Constancy:	Pauses at irregular intervals
Meaning:	Yin abundance with yang not in harmony (knotting of qi)
Explanation:	This pulse appears when abundant perverse yin qi, like accumulated cold or phlegm stagnation, cause coagulation of blood and blockage of qi. Because the (yang qi) transporting ability has diminished the pulse is slow and because the qi is blocked it is interrupted.

Intermittent	
Quality	**Explanation**
Rapidity:	Leisurely
Strength:	Weak
Constancy:	Pauses at regular intervals for a little longer than one beat
Meaning:	Decline and failure of zang qi or (if sudden and strong) obstructed qi
Explanation:	The intermittent pulse occurs when the mai qi is disconnected.

Rapid Stong	
Quality	**Explanation**
Rapidity:	Rapid
Strength:	Strong
Meaning:	Excessive heat
Explanation:	Heat causes the pulse to accelerate, hence it becomes rapid.

Rapid Weak	
Quality	**Explanation**
Rapidity:	Rapid
Strength:	Weak
Meaning:	Deficiency heat
Explanation:	See above

Slippery	
Quality	**Explanation**
Strength:	Rapid
Quality:	Slippery
Meaning:	Stagnant phlegm or stagnant food with abundant heat
Explanation:	The slippery pulse is produced by blood swirling through the blood vessels. Therefore it feels round and slippery. Besides being an indication of disease, it can also occur in healthy people, indicating abundant qi and blood.

Tight	
Quality	**Explanation**
Rapidity:	Impatient
Quality:	Tight, wiry
Meaning:	Cold pain sometimes with retention of food
Explanation:	The tight pulse indicates increased yin (cold perverse qi) with decreased yang. Perverse cold contracts, hence the vessels are stretched and therefore the pulse becomes tight.

Hasty	
Quality	**Explanation**
Rapidity:	Rapid
Constancy:	Sometimes rests for one beat at irregular intervals
Meaning:	Excessive yang heat with yin not in harmony (damaged yin)
Explanation:	This pulse appears when excessive yang heat stagnates in the three heater (at the level of the blood), frequently with internal accumulation of qi blood, phlegm or food. Because there is excessive yang heat, the pulse is rapid and because the qi is blocked it is interrupted.

Moving	
Quality	**Explanation**
Rapidity:	Rapid
Length:	Short
Strength:	Strong
Quality:	Slippery, wiry
Meaning:	Yin and yang fighting with each other
Explanation:	Either there is confusion and scurrying of qi caused by fright (yin loses) or pain caused by qi being blocked by blood (yang loses). Whenever yin and yang fight with each other the winner tries to calm the mai qi but the loser makes it strong, hence the moving pulse appears.

Long	
Quality	**Explanation**
Length:	Long
Meaning:	Excessive conditions or good health
Explanation:	This pulse only indicates disease when combined with other qualities. Normally it indicates healthy central qi.

Wiry	
Quality	**Explanation**
Length:	Long
Strength:	Strong
Quality:	Wiry
Meaning:	(Liver) wood diseases or wind diseases
Explanation:	The wiry pulse occurs when the qi is unable to spread properly. Thus it passes straight under the fingers (without being felt to rise or fall).

Short Strong	
Quality	**Explanation**
Length:	Short
Strength:	Strong
Meaning:	qi stasis
Explanation:	When blood and qi stagnation, phlegm stagnation or food accumulation block the qi passage (trachea), the mai qi cannot extend and the pulse becomes short and strong.

Short Weak	
Quality	**Explanation**
Length:	Short
Strength:	Weak
Meaning:	Qi damage
Explanation:	When there is insufficient qi to lead the blood the pulse also becomes short but is without strength.

Illustrations of the pulses may be found on the following pages:

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The Twenty Seven Pulses

English	Pinyin	Chinese	
		Old	New
Floating	Fú	浮	
Deep	Chén	沈	
Slow	Chí	遲	迟
Rapid	Shùo	數	
Slippery	Huá	滑	
Choppy	Sè	澀	涩
Empty	Xū	虛	
Full	Shí	實	实
Long	Cháng	長	
Short	Duǎn	短	
Flooding	Hóng	洪	
Minute	Wēi	微	
Tight	Jǐn	緊	紧
Retarded	Huǎn	緩	缓
Hollow	Kǒu	芤	
Wiry	Xián	弦	
Leather	Gé	革	
Firm	Láo	牢	
Soft	Rú	濡	
Weak	Ruò	弱	
Scattered	Sàn	散	
Thin	Xì	細	细
Hidden	Fu	伏	
Moving	Dòng	動	动
Hasty	Cù	促	
Knotted	Jié	結	结
Intermittent	Dài	代	

Complicated Diseases

English	Pinyin	Chinese	
		Old	New
Stroke	Zú Zhòng	卒中	
Wind Stroke	Zhòng Fēng	中風	中风
Phlegm Stroke	Zhòng Tán	中痰	
Qi Stroke	Zhòng Qì	中氣	
Corpse-like Stroke	Shī Jué	尸厥	
Attacks by External Perverse Energy	Zhòng Xié	中邪	
Perverse Wind	Fēng Xié	風邪	
Perverse Cold	Hán Xié	寒邪	
Summer Head	Shǔ Xié	暑邪	
Perverse Damp	Shī Xié	濕邪	湿邪
Internal Damage (Injury)	Nèi Shāng	內傷	内伤
Dietary Factors	Yǐn Shí	飲食	饮食
Over Fatigue	Láo Juàn	勞倦	劳倦
Malaria	Nüè Jí	瘧疾	疟疾
Diarrhea & Dysentery	Xiè Lì	泄痢	
Vomiting	Ǒu Tù	嘔吐	呕吐
Cholera	Huò Luàn	霍亂	霍乱
Coughing & Dyspnea	Ké Sòu	咳嗽	
Fire Heat	Huǒ Rè	火熱	火热
Steaming Bone Heat	Gú Zhēng	骨蒸	
Over Fatigue	Láo Jí	勞極	劳极
Loss of Blood	Shī Xié	失血	
Blood Coagulation	Yū Xiě	瘀血	
Emissions	Yí Jīng	遺精	遗精
White Discharges	Bái Zhuó	白濁	白浊
Three Consumptions	Sān Xiāo	三消	
Urinary Disadvantage	Lín Bì	淋閉	淋闭
Constipation	Biàn Bì	便鞕	便秘
Manic Depression	Diān	癲	
Delirium	Kuáng	狂	

Epilepsy	Xiàn	癎	痫
Numbness in the Throat	Hóu Bì	喉痹	
Dizziness	Xuán	眩	
Headache	Tóu Tòng	頭痛	头痛
Heart Pain	Xīn Tòng	心痛	
Fluid	Jīn Yè	津液	
Food	Shí Wù	食物	
Cold	Hán	寒	
Hot	Rè	熱	热
Qi	Qì	氣	气
Blood	Xiě	血	
Worm	Chóng	蟲	虫
Palpitation	Jì	悸	
Poison	Dú	毒	
Hernia Energy Pain	Shàn Qì Tòng	疝氣痛	疝气痛
Lower Back Pain	Yāo Tòng	腰痛	
Beriberi	Jiǎo Qì	脚氣	脚气
Atrophy	Wěi	痿	
Numbness	Bì	痹	
Jaundice	Huáng Dǎng	黃疸	
Yellow	Huáng	黃	
Wine	Jiǔ	酒	
Grain	Gǔ	谷	
Fatigue	Láo	勞	劳
Black	Hēi	黑	
Edema	Shuǐ Zhǒng	水腫	水肿
Fullness and Swelling	Zhàng Mǎn	脹滿	
Accumulation & Stagnation	Jù Jī	聚積	聚积
Attacks by Perverse Evil	Zhòng È	中惡	
Hot Abscess	Rè (Jū)	熱疽	热疽
Cold Abscess	Hán	寒疽	
Abscess	Jū (Ju)	疽	
Lung Abscess	Fèi Yōung	肺癰	肺痈
Lung Atrophy	Fèi Wěi	肺痿	
Intestinal Ulcers	Cháng Kuì Yáng	腸潰瘍	肠溃疡

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Li Shi Zhen, born in 1518 CE, was one of the most influential philosopher physicians in Chinese history. His works include the *Ben Cao Gang Mu,* a classical compendium of materia medica and one of the masterpieces of Chinese medical literature; and the *Bin Hu Mai Xue,* the classic of pulse diagnosis.

This current publication, the *Bin Hu Mai Xue,* was written by Li Shi Zhen as an extension of a Song Dynasty classic originally edited by his father. It has been an essential medical text in China for nearly five hundred years and continues to be a necessary manual for students of Chinese medicine and an important medical reference.

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